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LDCF/SCCF SPECIAL STUDY OF COMPLETED PROJECTS

(Prepared by the Independent Evaluation Office of the GEF)

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ACRONYMS

ADB	Asian Development Bank
AER	Annual Evaluation Report
APR	Annual Performance Review
CCA	Climate Change Adaptation
FAO	Food and Agriculture Organization of the United Nations
FFF	Fish, Fruit and Forest
GASIP	Ghana Agricultural Sector Investment Programme
GEF	Global Environment Facility
IEO	Independent Evaluation Office
IFAD	International Fund for Agricultural Development
LDCs	Least Developed Countries
LDCF	Least Developed Countries Fund
M&E	Monitoring and Evaluation
MTR	Midterm Review
NAPAs	National Adaptation Programs of Action
PIF	Project Identification Form
PIR	Project Implementation Reports
PSC	Project Steering Committee
ProVACCA	Promoting a Value Chain Approach to Climate Change Adaptation in Agriculture in Ghana
RTIMP	Root and Tuber Improvement and Marketing Programme
SCCF	Special Climate Change Fund
TE	Terminal Evaluation
TER	Terminal Evaluation Review
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WFM	Water and Flood Management
WHO	World Health Organization

EXECUTIVE SUMMARY

1. This special study is the first time the IEO has conducted an analysis of all the LDCF and SCCF projects completed so far as part of the LDCF/SCCF Annual Evaluation Report. The LDCF/SCCF special study, analyzes outcome, sustainability and M&E ratings, innovative approaches,[1] gender considerations, countries' fragility[2] and lessons learned. The objective of the study is to identify trends and linkages among rated variables and to find out which variables overall led to higher project outcome and sustainability ratings.

2. The special study reviewed terminal evaluations (TEs), terminal evaluation reviews (TERs), and other relevant project documentation of 53 completed projects,[3] having a combined grant value of $173.21 million. There are 31 completed projects that received funding from the LDCF and 22 completed project that received funding from the SCCF. These projects account for $95.85 million in LDCF funding and $77.36 million in SCCF funding. Geographically, 30 projects are in Africa, 12 are in the Asia and Pacific region, five projects are in the Latin America and Caribbean region, two projects are regional, and four projects are global.

3. For statistical analysis the program R was used. Spearman's Rank-Order Correlation was used for identifying correlation among variables.[4] When this statistical analysis did not find strong correlations, similarity analysis using Jaccard Similarity Index was performed to test the similarity between datasets of variables.[5] See annex 2 of the LDCF/SCCF Special Study of Completed Projects (GEF/LDCF.SCCF.26/ME/Inf.01) for complete calculations of Spearman's Rank Correlation and Jaccard Similarity Index.

4. Overall, the LDCF and SCCF funds performed well with respect to project outcomes and sustainability. Eighty-one percent of LDCF projects and 77 percent of SCCF projects received outcome ratings in the satisfactory range. A project in Bangladesh (GEF ID 3287, LDCF; IEO 2018a) which received a highly satisfactory rating, showed that including stakeholders at national and local levels empowered the proactive involvement of communities in the management of natural resources. A project in Guinea (GEF ID 3703, LDCF; IEO2018a), which received a moderately unsatisfactory outcome rating, determined that strong leadership is necessary to achieve the expected impact on the community.

[1] See annex 1 of the LDCF/SCCF Special Study of Completed Projects (GEF/LDCF.SCCF.26/ME/Inf.01) for a working definition of innovation.
[2] According to the World Bank Group's annually released Harmonized List of Fragile Situations (World Bank 2017).
[3] Five terminal evaluations submitted to the IEO in the calendar 2018 are included in the special study.
[4] The sign of the Spearman Correlation indicates the direction of correlation between an independent variable (X) and dependent variable (Y). The Spearman correlation coefficient is positive if Y tends to increase when X increases. If Y tends to decrease when X increases, the Spearman correlation coefficient is negative. A Spearman correlation of zero indicates that there is no tendency for Y to either increase or decrease when X increases.
[5] The Jaccard Similarity Index compares members for two sets to see which members are shared and which are distinct. It is a measure of similarity for the two sets of data, with a range from 0 percent to 100 percent. The higher the percentage, the more similar the two populations.

5. Seventy-three percent of all SCCF projects had a sustainability rating in the likely range, while only 60 percent of rated LDCF projects had sustainability ratings in the likely range. A project in Ecuador (GEF ID 2931, SCCF; IEO 2016), which received a likely sustainability rating, found that designing field projects with the community created commitment on the part of all stakeholders by supporting actions towards sustainability with equity. A project in Djibouti (GEF ID 3408, LDCF; IEO 2018a), which received an unlikely sustainability rating, found that it would have been better to address sustainability in the project design stage so that activities can be focused on developing sustainability mechanisms.

6. The analysis found that 83 percent of projects with innovative elements had outcome ratings in the satisfactory range, while only 57 percent of non-innovative projects received outcome ratings in the satisfactory range. Statistically, there was a weak positive correlation between innovation and project outcomes. Therefore, similarity analysis was done and a high similarity (Jaccard Similarity Index of 0.76) between data on innovation and project outcome ratings was found. There is a similarity in the data, in the sense that projects identified as innovative tend to align with higher project outcome ratings. Innovation was found to be especially impactful in projects funded through the SCCF, in which 91 percent of the innovative projects had satisfactory project outcome ratings. This finding is positive but not surprising as innovation is one of the SCCF's main pillars. While innovation is important, these findings should be treated with caution given the heterogeneity of interventions; there are project specific factors—beyond innovation—potentially influencing and/or driving a project's outcome.

7. The project in Ethiopia (GEF ID 4222, LDCF; IEO 2018a) found that awareness generated from climate information bulletins helped beneficiaries increase productivity by 100 percent. This innovative project had the ability to scale-up through immediate, short- and longer-term adaptation measures linked to development goals, needs and actions. Despite innovative elements, the Ghana project (GEF ID 4368, SCCF) from the 2018 cohort failed to use a logical framework to help it track its achievements and stated outcomes.

8. Fragility of a country is not rated in the TE's or Annual Performance Reports but has been determined retrospectively based on the World Bank Group's annually released Harmonized List of Fragile Situations (World Bank 2017). The GEF does not have a definition of fragility in an operational context nor a policy or special procedure for working in fragile states. GEF's work in fragile countries is focused primarily on SIDS and LDCs. The Sixth Comprehensive Overall Performance Study (OPS6) reported that compared to GEF-5 funding, support for fragile states increased from 8 to 10 percent, but OPS6 did not provide an assessment of the performance and results of such support. The World Bank harmonized list of fragile situations includes 24 of the 47 LDCs.

9. The analysis found that 83 percent of projects in non-fragile countries had outcome ratings in the satisfactory range. In comparison, only 71 percent of projects in fragile countries received outcome ratings in the satisfactory range. Note that all SCCF projects were implemented in non-fragile countries. While there was a very weak correlation between a

country's fragility and a project's outcome rating, there was a high similarity (Jaccard Similarity Index of 0.63) between the variables country's non-fragility and project outcome rating. This could be interpreted that while there is no correlation, there might be a third variable through which the variables interact. A review of project documents revealed that risks associated with a country's fragility were rarely discussed.

10. The Congo DR project (GEF ID 3718, LDCF; IEO 2016), found that despite some difficulties that marred the project, the project helped to reduce vulnerability of rural populations in for selected sites. This project was one of the only projects that addressed risks, such as the country's difficult post conflict political-administrative situation, in the PIF. A coastal communities project (GEF ID 3733, LDCF; IEO 2018a) found that political instability can greatly alter project outcomes, as was observed in this project when department officers were replaced. The TE acknowledges that the sustainability of achievements for this project will greatly depend on the country's political context in the coming years.

11. Statistically, none of the variables in the regression analysis[6] were found to be correlated to the sustainability of project outcomes. However, there was a high similarity between project outcomes and sustainability (Jaccard Similarity Index of 0.76); outcomes ratings in the satisfactory range tend to align with sustainability ratings in the likely range.

12. M&E implementation ratings and fragility were statistically found to be correlated with project outcome ratings. This finding is also supported by the similarity assessment. Fragility (Jaccard Similarity Index of 0.63) and M&E implementation ratings (Jaccard Similarity Index of 0.64) received high similarity scores in relation to project outcome ratings.

13. The analysis shows that projects that maintained or improved on M&E ratings—from M&E design to M&E implementation—had better outcome ratings overall. Most projects that maintained or improved M&E ratings already had M&E at entry ratings in the satisfactory range.

14. Analysis of a project in Bangladesh (GEF ID 3287, LDCF; IEO2018a) showed that efficient and systematic recording of relevant information and on progress of activities can lead to an increase in M&E ratings. The project in Sierra Leone (GEF ID 3716, LDCF) from the 2018 cohort, which received decreasing ratings from moderately satisfactory at M&E design to an unsatisfactory rating at M&E implementation, found that better monitoring and evaluation would have spotted underperforming activities and would have increased accountability and saved more money to be invested elsewhere.

15. Projects rated gender blind or gender aware at entry tend to maintain or improve their gender rating at entry during implementation, rating mostly similar or better at completion. Projects rated gender sensitive or gender mainstreamed at entry either maintain or decrease

[6] The variables being a country's fragility, project innovation, project outcome rating, M&E implementation rating, improvements in M&E rating from entry to implementation, and improvements in gender rating from entry to completion.

when compared to their gender rating at completion. Of the 15 projects rated gender sensitive at entry, only five maintained that rating while the remaining ten scored lower on gender at completion. The analysis shows that LDCF projects had a much higher rate of projects with declining gender rating from entry to completion (39 percent). For the SCCF projects, only 14 percent of projects had lower ratings from entry to completion.

16. The analysis shows that projects that maintained or improved on gender ratings had better outcome ratings overall. However, projects that maintained or improved gender ratings also had poorer at entry ratings on gender; since gender was not required to be included or reported on, there was room for improvement.

17. While many projects include gender as a component of their project activities, lessons learned regarding gender are not often addressed in the TE. However, a few projects offered interesting insights. Despite project activities that target women, the Haiti project (GEF ID 4447, LDCF; IEO 2018a) found that a lack of female staff represents a missed opportunity for the project and ultimately contributed to a decrease in gender rating from gender sensitive at entry to gender blind upon completion. The Cabo Verde project (GEF ID 3581, LDCF; IEO 2017), which was rated gender aware at entry and gender blind upon completion, found that the focus on gender cannot be limited to the number of female beneficiaries. A proper gender strategy should analyze gender roles and inequities and work with communities to transform these inequalities

I. BACKGROUND

18. Since 2013 the Independent Evaluation Office (IEO) of the GEF has been preparing the LDCF/SCCF Annual Evaluation Reports (AERs) and presenting the reports to the spring LDCF/SCCF Council meetings. The LDCF/SCCF AERs present an assessment of project outcomes and sustainability of outcomes, quality of project monitoring and evaluation and innovative approaches, based on an analysis of project ratings and information provided in terminal evaluations (TEs) that were received in the past calendar year. They also report on gender considerations and provide a synthesis of lessons learned. Project ratings on outcomes, sustainability and M&E come from the yearly Annual Performance Review (APR) of the GEF and are further explained in annex 1.

II. STUDY OBJECTIVE

19. This special study is the first time the IEO has conducted an analysis of all the LDCF and SCCF projects completed so far as part of the LDCF/SCCF AER reporting to Council. The study reviewed terminal evaluations (TEs) and other relevant project documentation of 53 completed projects. Individual LDCF and SCCF project performance is evaluated in the AERs as TEs are completed by the GEF Agencies and received by the IEO. The objective of the study is to identify trends and linkages among rated variables and to find out which variables overall led to higher project outcome and sustainability ratings.

20. The special study looked at the following ratings:

- Outcomes
- Sustainability
- Use of innovative approaches
- Gender considerations
- Monitoring and evaluation design
- Monitoring and evaluation implementation
- Fragility of country

21. Research question addressed in the study include:

- Do innovative projects achieve higher outcome ratings?
- How do project outcome ratings in fragile countries compare to those in non-fragile countries?
- Which variables (if any) lead to better sustainability ratings?

- Which variables (if any) lead to better project outcome ratings?
- Are there linkages and trends that can be identified among the measured variables?
- Does a change in gender rating, from gender rating at entry to gender rating at completion, influence outcome and sustainability ratings?
- Does a change in monitoring and evaluation rating, from M&E design to M&E implementation, influence outcome and sustainability ratings?

III. METHODOLOGY

22. The evaluation methodology applied for this special study has been developed over time as part of the Annual Performance Report (APR) of the GEF, prepared by the IEO, and can be found in the Guidelines for GEF Agencies in Conducting Terminal Evaluations (IEO 2018b). The TEs and related outcome ratings for each project have been done by external consultants, verified by the GEF Agency's evaluation offices (for some Agencies), and confirmed by the IEO. Projects included in this special study are those for which terminal evaluations were received between 2013 and 2018, and for which the ratings were verified by the IEO and included in APRs of the past five years. These projects were CEO approved between 2006 and 2013.

(a) Outcome ratings are provided in the TE's and APR's, and variables influencing these ratings are described. Note that project outcome is a combined rating of other variables, including relevance, efficiency and effectiveness of the project, and the formula has changed over time. For this study, outcome ratings from the APRs have been used.

(b) Ratings for the sustainability of outcomes, M&E design and M&E implementation are also reported on in the project's TE and taken over in the APRs. Equally, variables influencing these ratings are described in these documents.

(c) Gender ratings are not included in TEs. Most of the projects included in the study were approved well before the first gender policy, and thus do not have specific gender reporting requirements. The IEO has rated gender considerations for these projects retrospectively, at project entry (design) and at project completion.

(d) The use of innovative approaches has not been rated in TE's or APRs but has been determined retrospectively in past LDCF/SCCF AERs by the IEO.

(e) The fragility of a country is not rated in the TE's or APRs but has been determined retrospectively based on the World Bank Group's annually released Harmonized List of Fragile Situations (World Bank 2017). The GEF does not have a definition of fragility in an operational context nor a policy or special procedure for working in fragile states. GEF's work in fragile countries is focused primarily on SIDS and LDCs. The Sixth Comprehensive Overall Performance Study (OPS6) reported that compared to GEF-5 funding, support for fragile states increased from 8 to 10 percent, but OPS6 did not

provide an assessment of the performance and results of such support. The World Bank harmonized list of fragile situations includes 24 of the 47 LDCs.

Rating scales and definitions for each variable can be found in annex 1.

1. Data Analysis

23. As a first step, simple data visualization was used to identify trends and relationships. A type of frequency distribution, suitable for variables with relatively small numbers of different meaningful values, is cross tabulation. Cross tabulations show the response of subjects to one variable as a function of another variable. This analysis has been useful to get an overview of the distribution of the data. Based on the findings, projects of interest have been selected for qualitative analysis. While the analysis focuses on the LDCF/SCCF cohort of 53 projects, the analysis might be split between LDCF and SCCF projects if results warranted such a split.

2. Hypothesis Testing

24. For statistical analysis the program R was used. The data in this research are ordinal and binary and the variables are not normally distributed. Therefore, for identifying correlation among variables, Spearman's Rank-Order Correlation was used, which gives a value between -1 and 1 to be interpreted according to table 1, and further explained in annex 2.[7] The null hypotheses were that innovative projects do not achieve higher outcomes than non-innovative projects and that a country's fragility status has no impact on outcomes. The alpha was 0.05. Subsequently, to quantify uncertainty, the dataset was bootstrapped, and the correlation analysis was repeated. The bootstrapping procedure is further explained in annex 2.

Table 1: Interpretation of Spearman's Rank-Order Correlation Values

Correlation Value	**Interpretation**
1 (-1)	Perfect positive (negative) correlation
0.9 to 0.99 (-0.9 to -0.99)	Very strong positive (negative) correlation
0.7 to 0.89 (-0.7 to -0.89)	Strong positive (negative) correlation
0.5 to 0.69 (-0.5 to -0.69)	Moderate to strong positive (negative) correlation
0.3 to 0.49 (-0.3 to -0.49)	Moderate to weak positive (negative) correlation
0.1 to 0.29 (-0.1 to -0.29)	Weak positive (negative) correlation
0.01 to 0.09 (-0.01 to -0.09)	Very weak positive (negative) correlation
0	No correlation

[7] The sign of the Spearman Correlation indicates the direction of correlation between an independent variable (X) and dependent variable (Y). The Spearman correlation coefficient is positive if Y tends to increase when X increases. If Y tends to decrease when X increases, the Spearman correlation coefficient is negative. A Spearman correlation of zero indicates that there is no tendency for Y to either increase or decrease when X increases.

25. Finally, when this statistical analysis did not find strong correlations, similarity analysis using Jaccard Similarity Index was performed, to test the similarity between datasets of variables.[8] The interpretation of the Jaccard Similarity Index was done according to table 2 and further explained in annex 2.

Table 2: Interpretation of Jaccard Similarity Index Values

Jaccard Similarity Index Value	Interpretation
1	Identical
0.8 to 0.99	Very high similarity
0.6 to 0.79	High similarity
0.4 to 0.59	Moderate similarity
0.2 to 0.39	Low similarity
0.01 - 0.19	Very low similarity
0	Completely dissimilar

26. To evaluate which variables overall had a higher effect on project outcomes and sustainability, multiple linear regression was used. These tests had an alpha of 0.05 and the null hypotheses were that the independent variables had no effect on a project's outcome and sustainability ratings. Hypothesis testing is further discussed in annex 2.

27. However, it should be kept in mind that just because the confidence interval gives the values most compatible with the data, given the assumptions, it does not mean values outside it are incompatible; they are just less compatible. Especially with a small dataset, observational findings outside the statistical significance should not be dismissed.

3. Qualitative Analysis

28. After looking at the frequency distributions, specific projects that were on the high or low spectrum of the analysis have been selected for qualitative analysis. In the qualitative analysis the project documents such as the TE, terminal evaluation review (TER) and previous AERs have been scanned for relevant key words and indicators as to why the project ranked low or high in the assessment.

4. Limitations

29. There are a few limitations which should be kept in mind when reading this report.

[8] The Jaccard Similarity Index compares members for two sets to see which members are shared and which are distinct. It is a measure of similarity for the two sets of data, with a range from 0 percent to 100 percent. The higher the percentage, the more similar the two populations.

(a) With only 53 projects, the dataset of this special study is relatively small. A small dataset makes statistical analysis more difficult as data points are more sensitive to outliers. In addition, generalizability of the findings to a larger population is affected;

(b) The data for innovation and fragility are skewed (46 innovative and 7 non-innovative projects, 36 projects in non-fragile countries and 17 projects in fragile countries);

(c) Definitions, ratings as well as evaluation methods have changed over time, but at least these changes have been well documented in subsequent APRs and accepted by Council;

(d) Ratings are subject to the reviewers' discretion, but go through a validation process by being reviewed by the GEF Agencies' evaluation offices (if applicable) and subsequently the IEO;

(e) Four of the projects included in this special study were conducted globally (GEF ID 2553, 3679, 3907, 5320). Another two projects were regional (GEF ID 2902 and 3101). For this study, these projects were considered non-fragile, given they applied mostly to non-fragile countries. All global and regional projects were rated innovative.

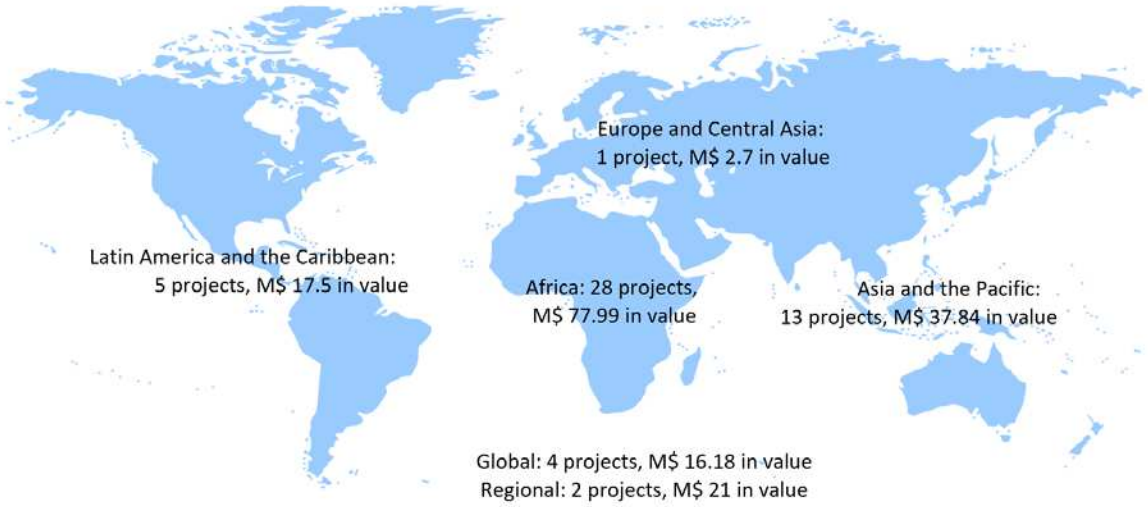
IV. ANALYSIS

30. This section first provides an overall summary of completed LDCF and SCCF projects. Subsequently, the ratings of the individual variables: sustainability, outcomes, innovation, fragility, gender considerations and monitoring and evaluation are discussed.

1. Assessment of Terminal Evaluations

31. The special study covers 53 completed projects, having a combined grant value of $173.21 million. There are 31 completed projects that received funding from the LDCF and 22 completed project that received funding from the SCCF. These projects account for $95.85 million in LDCF funding $77.36 million in SCCF funding. As shown in figure 1 below, geographically, 30 projects are from the Africa region, 12 are from the Asia and Pacific region, five projects from the Latin America and Caribbean region, one project is from the Europe and Central Asia region, two projects are regional, and four projects are global.

Figure 1: Geographical distribution of projects

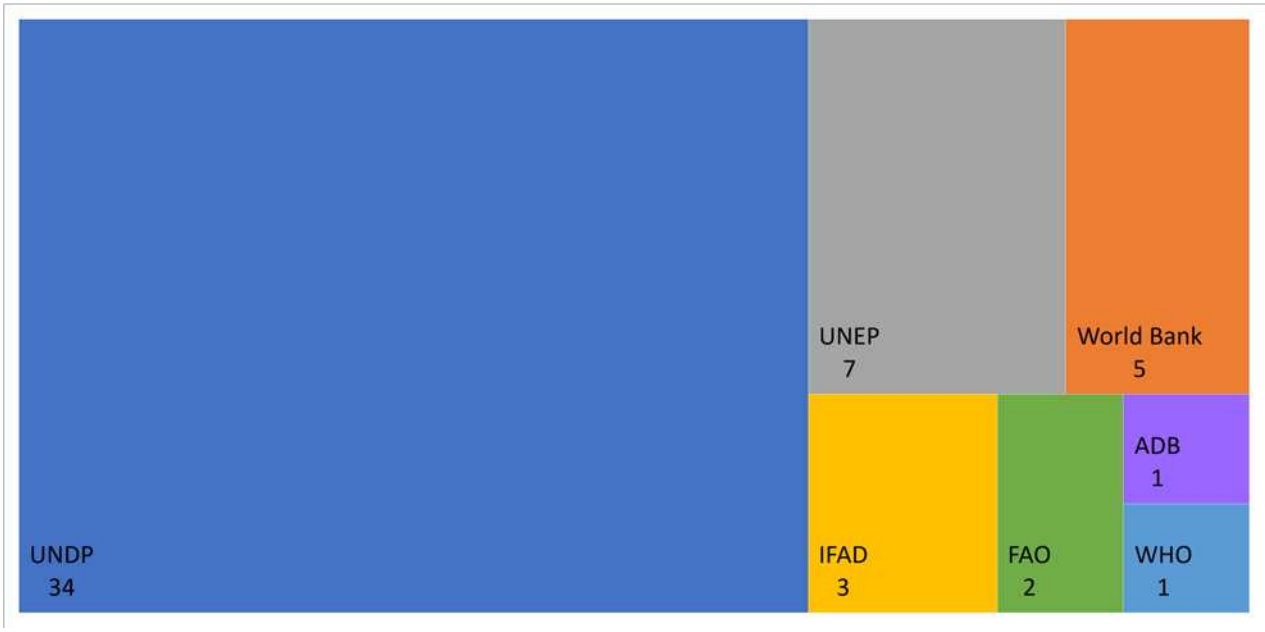


32. Figures 2 and 3 show that UNDP is the lead GEF Agency for LDCF/SCCF projects part of this cohort, both in grant value and number of projects.

Figure 2: LDCF/SCCF Grant Value (M$) by GEF Agency

Note: ADB = Asian Development Bank, FAO = Food and Agriculture Organization of the United Nations, IFAD = International Fund for Agricultural Development, UNDP = United Nations Development Programme, UNEP = United Nations Environment Programme, and WHO = World Health Programme.

Figure 3: Number of LDCF/SCCF Projects by GEF Agency



33. The next section provides an overview of projects by year of inclusion in previous LDCF/SCCF AER.

34. Five TE's were received during 2018 for inclusion in the AER, four of these projects received funding from the LDCF and one received funding from the SCCF. These projects accounted for $13.98 million in LDCF funding $2.6 million in SCCF funding. Geographically, four projects were in the Africa region and one project in the Caribbean. IFAD was the lead agency for three projects and the FAO led two projects.

35. In the 2017 AER cohort (IEO 2018a), 11 completed projects that received funding from the LDCF and eight completed projects that received funding from the SCCF. These projects accounted for $33.81 million in LDCF funding, and $30.05 million in SCCF funding. Geographically, one project was global, 11 were in Africa, five were in the Asia and Pacific region, two were from the Latin America and Caribbean region, and one project was in the Europe and Central Asia region. UNDP was the lead agency for 13 projects, UNEP led three, the World Bank led two projects, and one project was led by the ADB.

36. The 2016 AER (IEO 2017) includes five completed projects that received $17.03 million in funding from the LDCF. Geographically, two projects were in the African region, two projects were in the Asia and Pacific region, and one project was global. UNDP were the lead agency for four projects and UNEP led one project. There were no completed SCCF projects in the 2016 AER cohort.

37. A total of 11 projects were included in the AER 2015 (IEO 2016); six of the completed projects received funding from the SCCF and five received funding from the LDCF. These

projects accounted for $14.6 million in LDCF funding and $33.91 million in SCCF funding. Geographically, one project was global, two projects were regional, two projects were in the South American region and six projects were in Africa. UNDP were the lead agency for seven projects, the World Bank led two projects, UNEP was the lead agency for one project and the World Health Organization led one project.

38. In the AER 2014 (IEO 2015) cohort of TEs there were three completed projects that received funding from the SCCF and five completed projects that received funding from the LDCF. These projects accounted for $13.3 million in LDCF funding and $6.8 million in SCCF funding. Geographically, four projects are from Asia and Pacific region and four projects are from the African region. The United Nations Development Programme were the lead agency for seven projects and the World Bank led one project.

39. The AER 2013 (IEO 2014) included five completed projects, four of which received funding from the SCCF and one that received funding from the LDCF. These projects accounted for $3.4 million in LDCF funding and $4 million in SCCF funding. Geographically, one project was global, one project was in the Asia and Pacific region and three projects were in the African region. UNDP was the lead agency for four projects and UNEP led one project.

2. Sustainability Ratings

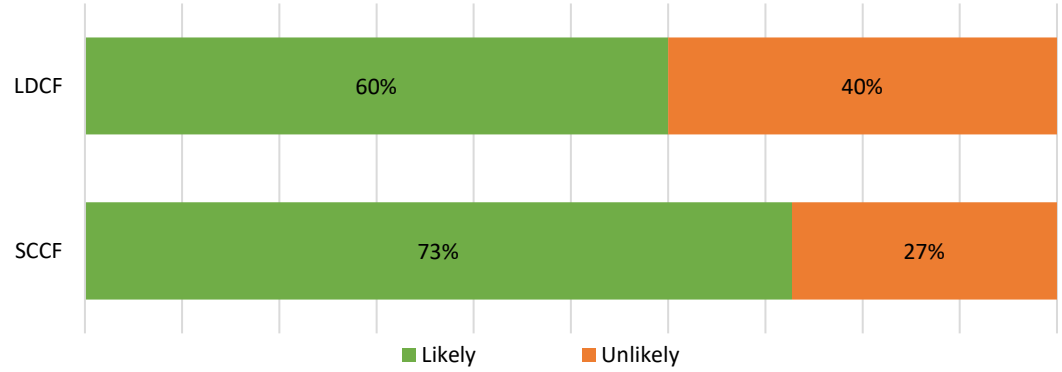
40. Table 3 shows project sustainability ratings for all projects. A total of 34 (64%) projects received sustainability ratings in the likely range: 26 (49%) projects were rated moderately likely and 8 (15%) projects were rated likely. In total, 18 (34%) projects received ratings in the unlikely range: 17 moderately unlikely and one unlikely. One project received no rating because the available information was not sufficient to assess the expected incidence and magnitude of risks to sustainability.

Table 3: Sustainability Ratings

	LDCF		**SCCF**		**Total**	
	[#]	[%]	[#]	[%]	[#]	[%]
Likely	4	13%	4	0%	8	15%
Moderately likely	14	45%	12	0%	26	49%
Moderately unlikely	11	35%	6	27%	17	32%
Unlikely	1	3%	0	0%	1	2%
No rating	1	3%	0	0%	1	2%
Total	31	100%	22	100%	53	100%

41. Figure 4 below shows that 73 percent of all SCCF projects had a sustainability rating in the likely range while only 60 percent of rated LDCF projects had ratings in the likely range.

Figure 4: Sustainability of Rated LDCF and SCCF Projects



42. After quantitative analysis, the projects receiving the highest (likely) and lowest (unlikely) sustainability ratings were qualitatively analyzed. Subsequently, projects that specifically mentioned sustainability and included lessons learned connected to sustainability were selected for discussion below.

Projects with Sustainability Ratings in the Likely Range

43. The Adaptation to Climate Change through Effective Water Governance project (GEF ID 2931, SCCF: IEO 2016) in Ecuador received a likely sociopolitical sustainability rating. The TE commends the project's strategy of coordinating between public institutions and civil society, and "promoting the consolidation of a new socio-cultural paradigm of involvement of the broad set of citizens on the challenges of climate change and its effects" (TE, p.61). The TE finds that communities have incorporated the conservation practices introduced, and that the creation of maintenance and operational guides have allowed for the sustainability of work implemented at the community level. The TE notes however that many communities still lack all the technical skills necessary, such as ability to build barricades, thus specialists are still needed for replication between communities (TE, p.61). Lessons learned include: Designing field projects with the community and selecting them through public mechanisms generated adhesion and commitment on the part of all stakeholders, by supporting actions towards sustainability with equity (TER, p.11).

44. The Mainstreaming Adaptation to Climate Change into Water Resources Management and Rural Development Project (GEF ID 3265, SCCF; IEO 2015) in the People's Republic of China was part of a bigger US$ 463.50 million project, titled "The Irrigated Agriculture Intensification III Project." The project's innovations range from improved Water Use Associations, to water savings techniques to climate change adaptation, all of which are critical for agricultural sustainability (TE, p.12). The institutional innovations have helped to support many of the technical outcomes under the project and to reduce the sustainability risks to project outcomes (TE, p.21). Lessons learned include: The project has demonstrated that identifying ways to

improve efficiency of the water resource already available, obtaining "real" water savings, and improving water productivity should be the approach. This can be achieved with minimal investment, with huge gains to be realized (TE, p.25).

Projects with Sustainability Ratings in the Unlikely Range

45. The Vulnerable Coastal Zones project in Djibouti (GEF ID 3408, LDCF; IEO 2018a) aimed at providing institutional capacity strengthening (climate-proof coastal planning, support in climate data collection and analysis) and actions targeted towards the main natural resources users to provide them with resilient and no-regrets adaptation options. The project showed some socio-political and institutional sustainability. However, some project interventions did not fully address environmental sustainability (e.g., irrigation practice). The financial sustainability of the project outputs and outcomes is not assured. There are no secure budgets or financial mechanisms to carry the outputs into the future (e.g., replace parts; maintain the fencing at the mangrove and the date-palm sites). Given that financial sustainability is unlikely, 'sustainability' is as a whole rated as unlikely (TE, p.13). Lessons learned include: Sustainability should be fully addressed at project design stage (or during inception phase at the latest). Where relevant, each output can have a dedicated activity focused on developing its sustainability mechanism (TE, p.81-82).

3. Outcome Ratings

46. Table 4 shows project outcome ratings for all projects. Forty-two (79%) projects received ratings in the satisfactory range: 18 (34%) moderately satisfactory, 22 (42%) satisfactory and two (4%) highly satisfactory. Eleven projects (21%) received moderately unsatisfactory ratings. No projects were rated unsatisfactory or highly unsatisfactory on project outcome.

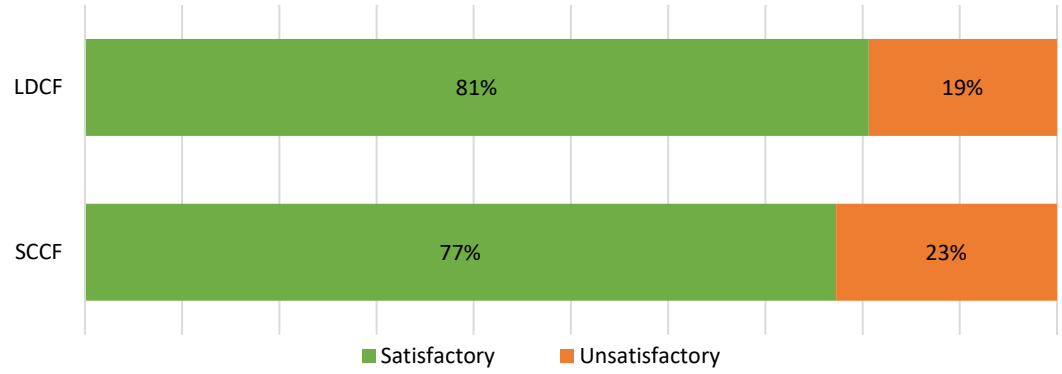
Table 4: Outcome Ratings

	LDCF		**SCCF**		**Total**	
	[#]	[%]	[#]	[%]	[#]	[%]
Highly satisfactory	2	6%	0	0%	2	4%
Satisfactory	17	55%	5	23%	22	42%
Moderately satisfactory	6	19%	12	55%	18	34%
Moderately unsatisfactory	6	19%	5	23%	11	21%
Unsatisfactory	0	0%	0	0%	0	0%
Highly unsatisfactory	0	0%	0	0%	0	0%
Total	31	100%	22	100%	53	100%

47. Figure 5 shows that there are no major differences between LDCF and SCCF projects in terms of outcome ratings. Of all LDCF projects, 81 percent received outcome ratings in the

satisfactory rate. Of all SCCF projects, 77 percent received outcome ratings in the satisfactory range.

Figure 5: Outcome Ratings for LDCF and SCCF Projects



48. After quantitative analysis, the projects receiving the highest (highly satisfactory) and lowest (moderately unsatisfactory) outcome ratings were qualitatively analyzed. Subsequently, projects that specifically mentioned outcomes were selected for discussion below. Note that more projects are discussed further down in the report, where project innovation and a country's fragility are linked to project outcomes.

Projects with Highly Satisfactory Outcome Ratings

49. A community-based adaptation project in Bangladesh (GEF-ID 3287, LDCF; IEO 2018a) is addressing one of 15 adaptation strategies included in Bangladesh's National Adaptation Program of Action (NAPA) of 2005. To reduce vulnerability of coastal communities to the impacts of climate change induced risks in four 'upazilas' (an administrative region in Bangladesh) in coastal districts, coastal polders, embankments and coastal forests were developed through an iterative, trial-and-error process (TE, p.16). Based on the largely achieved project targets and the demonstrable efforts by the project unit and the implementing and executing agencies to overcome challenges to implementation, the terminal evaluation rates the effectiveness of the project outcomes as highly satisfactory (TE, p.42). Lessons learned include: Appropriate governing structures that included all relevant stakeholders, at both national and local level, empowered project management unit and the proactive involvement of communities in the management of natural resources (TE, p.9).

50. The overall goal of the Ethiopia (GEF-ID 4222, LDCF; IEO 2018a) project was to catalyze innovative adaptation actions in the context of Ethiopia's NAPA and development policies and strategies. Farmers adopted five different agricultural based technologies that adapted better water management practices to irrigate. Farmers effectively used early warning climate information to prepare for the sowing and harvest seasons. Moreover, the project

demonstrates capability to convince key stakeholders to join and meet a significant demand for adaptation of the most vulnerable communities in Woredas and Kebeles (TE, p.9).

Projects with Moderately Unsatisfactory Outcome Ratings

51. The TE of the Guinea Vulnerable Coastal Zones project (GEF ID 3703, LDCF; IEO 2018a) concludes that project achievements and outcomes, even the most successful ones, such as market gardening and reforestation, have not generated the expected impact on targeted communities. This is largely due to a weak leadership, which should be able to enhance these successes, create a ripple effect and subsequently initiate a change in the behavior of local communities. The TE suggests creating a leadership who can initiate change in local communities' behavior (TE, p.30).

4. Innovation

52. Table 5 shows project innovation ratings. Forty-six projects (87%) showed clear innovative elements and were rated innovative, while seven projects (13%) did not show innovative elements and were rated non-innovative. SCCF projects had a higher percentage (91%) of projects rated innovative compared to LDCF projects (84%). SCCF's support for innovative projects was also identified by the IEO's program evaluation of the SCCF as a comparatively distinctive element of the Fund (IEO 2018c).

Table 5: Innovation Ratings

	LDCF		**SCCF**		**Total**	
	[#]	[%]	[#]	[%]	[#]	[%]
Innovative	26	84%	20	91%	46	87%
Non-innovative	5	16%	2	9%	7	13%
Total	31	100%	22	100%	53	100%

53. After quantitative analysis, projects that specifically mentioned innovation or a lack thereof and included lessons learned connected to innovation were selected for discussion below. A more detailed analysis of innovative and non-innovative projects can be found in the Relationships Among Variables—Innovation and Outcomes section of this report.

Innovative Projects

54. One recurrent topic is innovations in early warning systems and related communication. China, as part of the global project (GEF ID 2553, SCCF; IEO 2016), "developed software modules for a heat-related health risk early warning system using a mathematical model based on historical health and climate data" (TE, p.44). The software provides early district forecasts of heat related health risks and offers public health recommendations, including district-specific health communication products. Uzbekistan, part of the same global project, developed a 'Meteorological Comfort Index' based on ten-day meteorological forecasts; the index was then

included in the early warning system. Lessons learned include: Projects should be encouraged to focus not just on shorter-term outputs to address climate variability, but also on establishing processes to address longer-term climate change. Investigate approaches, such as theory of change, that can facilitate achieving objectives and not just outcomes (TE, p.52).

55. The introduction of innovative water technologies is another topic identified in project documentation of closed projects. Many of the Pacific island countries that were part of the Pacific regional project (GEF ID 3101, SCCF; IEO 2016) are characterized by poor quality and/or low levels of groundwater resources. Solar water purification systems were introduced on the Marshall Islands and Nauru, with varying levels of success. Solar water pumps were installed in Tonga and other systems were perhaps less innovative, but included rainwater catchment and storage systems on Niue, Tokelau and Tuvalu. Lessons learned include: Local policy and institutional environment analysis should be carried out prior to implementation to identify opportunities for policy mainstreaming (TE, p.13).

5. Fragility

56. Table 6 shows project country fragility ratings. In total, 36 (68%) projects took place in non- fragile countries while 17 (32%) projects were executed in fragile countries. It needs to be noted that these numbers include four global and two regional projects which are considered non-fragile.

57. All the projects in fragile countries were funded by the LDCF, making up 55 percent of the LDCF portfolio (17 projects) for this cohort. All the SCCF projects were conducted in non-fragile countries. A more detailed analysis of fragility can be found in the Relationships between Fragility and Outcomes section of this report.

Table 6: Fragility Ratings

	LDCF		**SCCF**		**Total**	
	[#]	[%]	[#]	[%]	[#]	[%]
Non-fragile	14	45%	22	100%	36	68%
Fragile	17	55%	0	0%	17	32%
Total	31	100%	22	100%	53	100%

6. Gender Considerations

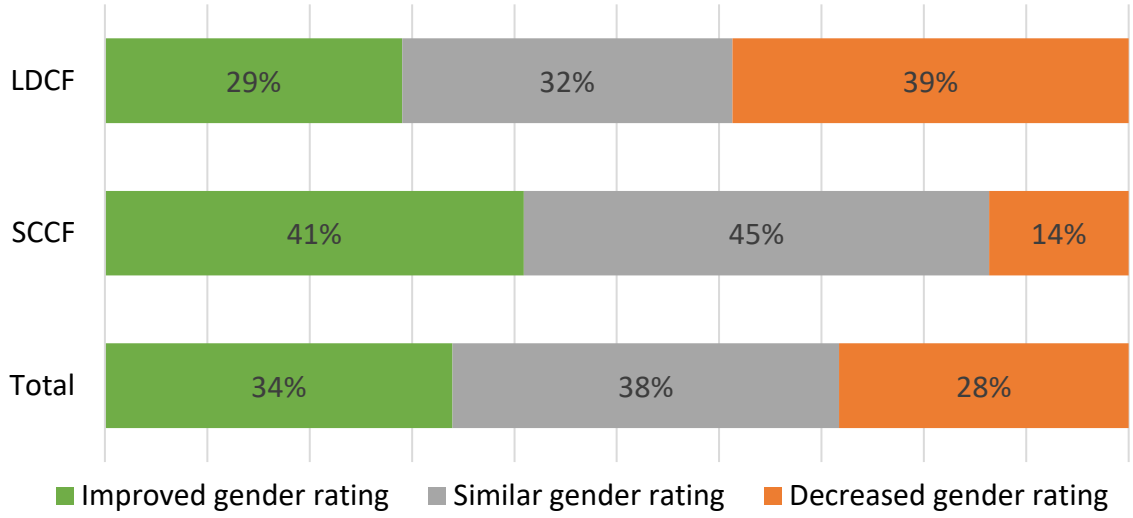
58. Table 7 shows gender ratings at project entry and completion. At entry, one project (2%) was rated gender mainstreamed, 15 (28%) projects were rated gender-sensitive, 24 (45%) gender-aware, and 13 (25%) gender-blind. Upon completion 14 (26%) were rated gender-sensitive, 30 (57%) gender-aware, and 9 (18%) gender-blind.

Table 7: LDCF and SCCF Combined Gender Rating at Project Entry and Completion

At Completion ➡	Gender Blind		Gender Aware		Gender Sensitive		Gender Mainstreamed		Gender Transformative		Total	
At Entry ⬇	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Gender Blind	3	6%	10	19%	0	0%	0	0%	0	0%	**13**	**25%**
Gender Aware	4	8%	12	23%	8	15%	0	0%	0	0%	**24**	**45%**
Gender Sensitive	2	4%	8	15%	5	9%	0	0%	0	0%	**15**	**28%**
Gender Mainstreamed	0	0%	0	0%	1	2%	0	0%	0	0%	**1**	**2%**
Gender Transformative	0	0%	0	0%	0	0%	0	0%	0	0%	**0**	**0%**
Total	**9**	**18%**	**30**	**57%**	**14**	**26%**	**0**	**0%**	**0**	**0%**	**53**	**100 %**

59. Figure 6 shows changes in gender rating from entry to completion. The data shows that 20 (38%) projects had a similar gender rating at entry and upon completion, while 18 (34%) projects improved and 15 (28%) projects decreased their gender rating from entry to completion. No project was rated gender transformative at entry or at completion.

Figure 6: Changes in Gender Rating from Entry to Completion



60. Those projects rated gender blind or gender aware at entry tend to maintain or improve their gender rating, rating mostly similar or better at completion. Projects rated gender sensitive or gender mainstreamed at entry either maintain or decrease when compared to their gender rating at completion. Of the 15 projects rated gender sensitive at entry, only five maintained that rating while the remaining ten scored lower on gender at completion. No project was rated gender transformative at entry or completion and only one project was gender mainstreamed at entry.

61. Looking at only the LDCF projects the data shows that 10 (32%) projects had a similar gender rating at entry and upon completion, while 9 (29%) projects improved and 12 (39%) projects decreased their gender rating from entry to completion. Data for SCCF projects shows that 10 (45%) projects had a similar gender rating at entry and upon completion, while 9 (41%) projects improved and only 3 (14%) projects decreased their gender rating from entry to completion.

62. The analysis shows that LDCF projects had a much higher rate of projects with declining gender rating from entry to completion (39%). For the SCCF projects, only 14% of projects had lower ratings at entry than at completion. The discussion below highlights the more explicit cases.

63. The Sierra Leone project (GEF ID 3716, LDCF), part of the AER 2018 cohort, was the only project which received a gender mainstreamed rating at entry and gender sensitive rating at completion. Gender played a substantial role in the project which focused on integrating adaptation to climate change into agricultural production and food security. It is possible to report that the project positively impacted 1,078 women with climate resilient rice varieties, as evidenced through reports on double and triple cropping and doubling of yield and profit margins over the standard paddy rice. 180 women, youth and heads of vulnerable households were trained through the Gender Action Learning System methodology to create awareness on climate change and 102 women were trained in land management and erosion control (TE, p.9). It needs to be pointed out that the numbers stated above are not definitive as the TER was unable to obtain definitive beneficiary numbers. Lessons learned include to keep better records of beneficiary data to enable relevant assessment of the program.

64. The Haiti project (GEF ID 4447, LDCF), also part of the AER 2018 cohort, was rated gender sensitive at entry and gender blind upon completion. The project focused on building climate resilience in Haiti past an earthquake. The most marginalized groups, such as women, have been supported through "cash for work" actions. Project activities that also target women include raising awareness of the population on the role of women. The TE states that a limitation to the project was the lack of female staff, showing their little involvement and a lack in awareness-raising regarding gender issues (TE, p.33). This represents a missed opportunity for the project and can serve as a lesson learned for future planning of activities.

65. The Samoa project with GEF ID 3358 (LDCF; IEO 2015) was rated gender aware at entry and gender blind upon completion. Overall, the project has contributed to an improved

consideration of gender aspects. For example, the clinical level health care providers are significantly represented by women, and the capacity building supported by the project has empowered these professionals in addressing climate related health risks. And, the vulnerable members of the communities to climate risks are predominantly women and children, so the results facilitated by the project have also benefited these groups (TE, p.28). Lessons learned include: Farmers involved in Field Trials need to be better informed and more efforts should be dedicated in explaining the objective through personal meetings and documentation (TE, p.39).

66. The Cabo Verde project (GEF ID 3581, LDCF; IEO 2015) was rated gender aware at entry and gender blind upon completion. The TE states that project implementation favored participation of women as beneficiaries of pilot projects and trainings. Moreover, the project established partnerships with women's association to raise awareness on climate change issues. However, the project did not have any specific and holistic gender strategy that involved analysis of gender roles and power balances and inequities (p.67). Lessons learned include: If a project intends to take gender roles into consideration, this cannot be limited to tally the number of female participants to workshops and trainings or the number of female beneficiaries. A gender strategy involves proper analysis of gender roles and inequities and work with communities to transform these inequalities (TE, p.82).

67. While the global project (GEF ID 5320, LDCF; IEO 2017) was rated gender aware at entry, it was rated gender blind upon completion. The TE states that "the program design did not include a clear gender analysis, and there was no evidence of any gender-disaggregated targets, indicators or gender equity goals." (p.9) As a result, there "was also no documented evidence that gender was accounted for in participation of trainings and capacity building activities" (p.10). No further gender results were reported. The TE did not list any lessons learned in connection with gender considerations.

68. A climate resilient infrastructure project in Vietnam (GEF ID 3103, SCCF; IEO 2018a) was rated gender aware at entry and gender sensitive at completion. Project indicators were not gender sensitive; however, the project team has made significant efforts to mainstream gender into the project activities design, monitoring framework, and implementation. The project has also addressed the gender dimension during the activities implementation in all outcomes by having two national gender specialists as part of their team. The gender dimension has been also taken into consideration during key project activities such as trainings and project staffing, commune level demonstration activities implementation, separate focus groups were held with women and men by the project social team. Sub-contractors for demonstrations activities were also required by contract to include women in their locally- recruited labor force (TE, p.29). Lessons learned include: Assess the specific enabling environment, organizational structure and mandates, and the human resource development constraints and needs in relation to well-defined and realistic capacity development outcomes (TE, p.33).

69. A project in China (GEF ID 3265, SCCF; IEO 2015) was rated gender aware at entry and gender sensitive at completion. The TE states that participation by women was emphasized and substantially increased in Water Use Association development, with specialized training

provided to women both in Water Use Associations and to project staff in the provinces as well integrating this into State Office of Comprehensive Agricultural Development policies to promote participation by women in Water Use Associations (p.19). There is no special mention of gender in lessons learned. However, the TE states that it is critical to get all the stakeholders to buy into the program (TE, p.25).

70. The TE of the Congo DR project (GEF ID 3718, LDCF; IEO 2016) shows that efforts were made to include women as project stakeholders; "Women's participation in project activities was very decisive" (TE, p.35). There is no disaggregation of indicators or any notion of gender mainstreaming. The project had a statement in the project document and request for CEO endorsement about intending to create a gender strategy, however, subsequent project documentation makes no mention of gender mainstreaming strategies or approaches having been created.

71. The Gambia Project (GEF ID 3728, LDCF; IEO 2016) was rated gender aware at entry and gender sensitive at completion. The project document considered the benefits of increased access to climate information and early warnings for women farmers. To enhance the contribution and ownership opportunities for both men and women, it had proposed to adopt a gender-sensitive strategy, in which women farmers and women groups would be positively targeted to ensure gender equity and balance with regards to participating in and benefiting from project activities. Additionally, stakeholders varied and included public and private sectors, civil society, women and youth groups, and representation in these groups took gender into consideration (p.31). The TE found that sensitization and training sessions with stakeholders in pilot sites ensured participation of women.

72. The TE of the Samoa project with GEF ID 4216 (LDCF; IEO 2017) states that the project provided "training for women in adaptive processes and training for increasing awareness as to the impact of climate change and means to build resilience," but does not mention the number of female beneficiaries or otherwise female stakeholders in the project. The project also addressed gender by providing training for women in adaptive processes and training for increasing awareness as to the impact of climate change and means to build resilience. Women also became committee members at the community and the district levels. There are no lessons learned identified specifically to gender.

73. The Ethiopia project (GEF ID 4222, LDCF; IEO 2018a) was rated gender aware at entry and gender sensitive at completion. The TE states that the project has demonstrated how farmers with gender-sensitive capacity for men and women in the community, based on their roles and access to resources, social networks and information, can be part of the adaptation process (TE p. 56). There are no lessons learned outlined in the TE.

7. Monitoring and Evaluation

74. Table 8 shows M&E design and M&E implementation ratings for all projects. For M&E design, 34 (64%) projects received ratings in the satisfactory range: 24 (45%) projects were rated satisfactory and ten (19%) projects were rated moderately satisfactory. Eighteen (34%)

projects received ratings in the unsatisfactory range: 14 (26%) moderately unsatisfactory and four unsatisfactory. One project received no rating because the available information did not allow an assessment of the quality of M&E design.

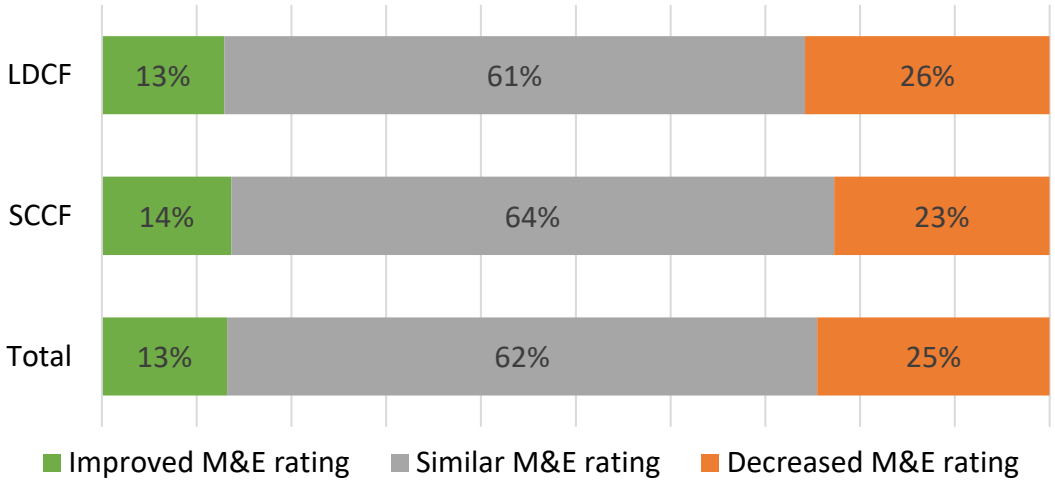
75. For M&E implementation 31 (58%) projects received ratings in the satisfactory range: one project was rated highly satisfactory, 16 (31%) projects were rated satisfactory, 14 (26%) projects moderately satisfactory. Twenty (38%) projects received ratings in the unsatisfactory range: 15 (28%) projects moderately unsatisfactory, five projects unsatisfactory. Two projects (4%) received no rating because the available information did not allow an assessment of the quality of M&E implementation. No project was rated highly unsatisfactory on M&E implementation.

76. Figure 7 shows changes in M&E design and M&E implementation ratings. The data shows that 33 (62%) projects had a similar M&E design and M&E implementation rating, while six (13%) projects improved, and 13 (25%) projects received a lower rating on M&E implementation compared to M&E design. Differences between the LDCF and SCCF on the changes in M&E rating from design to implementation are rather small. One LDCF projects that received a satisfactory rating for M&E design improved on that rating and received a highly satisfactory rating for M&E implementation, which was also the only highly satisfactory rating on M&E for the two Funds

Table 8: LDCF and SCCF Combined M&E Ratings at Design and at Implementation

At Imple-mentation → / At Design ↓	No Rating		Highly Unsatis-factory		Unsatis-factory		Moderately Unsatisfactory		Moderately Satisfactory		Satis-factory		Highly Satisfactory		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No rating	0	0%	0	0%	0	0%	1	2%	0	0%	0	0%	0	0%	**1**	**2%**
Highly Unsatisfactory	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	**0**	**0%**
Unsatisfactory	0	0%	0	0%	1	2%	2	4%	1	2%	0	0%	0	0%	**4**	**8%**
Moderately Unsatisfactory	1	2%	0	0%	2	4%	10	19%	0	0%	1	2%	0	0%	**14**	**26%**
Moderately Satisfactory	0	0%	0	0%	1	2%	0	0%	8	15%	1	2%	0	0%	**10**	**19%**
Satisfactory	1	2%	0	0%	1	2%	2	4%	5	10%	14	27%	1	2%	**24**	**45%**
Highly Satisfactory	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	**0**	**0%**
Total	**2**	**4%**	**0**	**0%**	**5**	**10%**	**15**	**28%**	**14**	**26%**	**16**	**31%**	**1**	**2%**	**53**	**100%**

Figure 7: Changes in M&E Rating from Design to Implementation



77. Given the small differences between the two Funds on these indicators there will not be a split in data presented specifically for the LDCF and SCCF, but some projects are discussed next, including the project with GEF ID 3287, which is the only project that received a highly satisfactory rating on M&E implementation. The discussion below highlights the more explicit cases.

78. The M&E rating for the climate change project in Bangladesh (GEF ID 3287, LDCF; IEO 2018a) improved from a satisfactory M&E design rating to highly satisfactory rating on M&E implementation. The TE notes that the project received a highly satisfactory rating because the project efficiently and systematically recorded and managed relevant information on progress of activities. Further, monitoring and evaluation findings were incorporated into project work plans. Some deficiencies in the project's indicator framework were corrected after the midterm review. Lessons learned include: Appropriate governing structures that included all relevant stakeholders, at both national and local level, empowered, project management unit and the proactive involvement of communities in the management of natural resources (TE, p.9).

79. The TER rates M&E design of the Benin project (GEF ID 3704, LDCF; IEO 2017) as moderately satisfactory as the project lacks a comprehensive strategic results framework to guide its work. While the project document (PD) presents a set of key indicators to measure the project's success (PD, p.32), indicators are only set at objective and outcome levels. Project outputs are not defined, nor are output-level indicators. As a result, the M&E plan described in the PD only focuses on part of the project's logical framework and fails to monitor the very activities and outputs that ultimately generate outcomes and contribute to project impact. Overall, the TE presents the picture of a project in which M&E activities were regularly and carefully conducted, and frequently used as part of the decision-making process.

80. The climate resilient water management and agriculture practice project in Cambodia (GEF ID 3404, LDCF; IEO 2015) improved from an unsatisfactory M&E design rating to a moderately satisfactory M&E implementation rating. The M&E design was rated moderately unsatisfactory because there was no sophisticated design on M&E to be implemented in the project, but rather a simple although comprehensive M&E system. This limits the assessment of the outcomes and impacts of the project. While the M&E design was not very sophisticated, at the end, because of various good monitoring procedures being prepared and implemented during the project lifetime, the overall M&E implementation is positive and rated moderately satisfactory (TE, p.29).

81. The M&E rating for the Ghana (GEF ID 3218, SCCF; IEO 2017) project decreased from a satisfactory rating at M&E design to unsatisfactory at M&E implementation. The TE finds that the quality of M&E was mixed between the implementation of Promoting a Value Chain Approach to Climate Change Adaptation in Agriculture in Ghana (ProVACCA) under the Root and Tuber Improvement and Marketing Programme (RTIMP) and the Ghana Agricultural Sector Investment Programme (GASIP). The TE also found that the project had not kept a logframe to monitor project implementation, this was completed retroactively at the request of the final mission prior to closure. Based on the reports provided to the June 2017 TER mission, regular project progress reporting under GASIP appears not to have been carried out. The mission found a clear reliance by the project on GEF Project Implementation Reports (PIR) as the only measure of project reporting instead of progress reports as well as a reliance on the supervision mission reporting (TE, p.17).

82. The project in Sierra Leone (GEF ID 3716, LDCF), part of the AER 2018 cohort, decreased from a moderately satisfactory rating at M&E design to an unsatisfactory M&E implementation rating. The TE sates that the project suffered from a deficit in effective results/impacts reporting, analysis and in general documentation and filing practices. During the completion mission it was frequently explained that synergies had to be found between the two projects to avoid burdening the project staff with double reporting efforts. Lessons learned include: Better monitoring and evaluation would have spotted the underperforming rooftop rain harvesting activities earlier and payment by milestones would have increased accountability and saved more money to be reinvested elsewhere (TE, p.10).

V. RELATIONSHIPS AMONG VARIABLES

1. Outcomes and Innovation

83. This section addresses the relationship between innovation and outcomes in LDCF and SCCF funded projects, specifically through the following question: Do innovative projects achieve higher outcomes?

Table 9 provides an overview of all projects' innovation and outcome ratings. Out of the seven (13%) non-innovative projects, three (6%) were in the unsatisfactory range while four (7%) were rated in the satisfactory range. None of the non-innovative projects received a highly

satisfactory rating. Out of the 46 (87%) total innovative projects, eight (15%) were rated in the unsatisfactory range and 38 (72%) received ratings in the satisfactory range. Two (4%) innovative projects received highly satisfactory outcome ratings.

Table 9: Innovation and Outcome Ratings

	Outcome rating												Total	
	Highly Unsatisfactory		Unsatisfactory		Moderately Unsatisfactory		Moderately Satisfactory		Satisfactory		Highly Satisfactory			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Innovative	0	0%	0	0%	8	15%	16	30%	20	38%	2	4%	**46**	**87%**
Non-Innovative	0	0%	0	0%	3	6%	2	4%	2	4%	0	0%	**7**	**13%**
Total	**0**	**0%**	**0**	**0%**	**11**	**21%**	**18**	**34%**	**22**	**42%**	**2**	**4%**	**53**	**100%**

84. Figure 8 below shows that 83 percent of projects found to be innovative had outcomes in the satisfactory range while only 57 percent of non-innovative projects received satisfactory range outcome ratings. The discussion below highlights the more explicit cases.

Figure 8: Outcome Ratings of Innovative and Non-Innovative Projects

Innovative Projects with Highly Satisfactory Outcome Scores

85. The community-based adaptation project in Bangladesh (GEF-ID 3287, LDCF; IEO 2018a) focused on reducing vulnerability of coastal communities to the impacts of climate change induced risks in four 'upazilas' (an administrative region in Bangladesh) in coastal districts. The project has contributed strongly to the development of a new agricultural modality in the coastal zone, the Fish, Fruit and Forest (FFF) model and variants thereof, which have been successful in increasing household income and food security. While integrated aquaculture-livestock-agriculture homestead systems are common in Bangladesh and in South East Asia in general, implementation at the foreshore, benefiting landless communities was a unique

contribution by this project (TE, p.53). Based on the largely achieved project targets and the demonstrable efforts by the project unit and the implementing and executing agencies to overcome challenges to implementation, the terminal evaluation rates the effectiveness of the project outcomes as highly satisfactory (TE, p.42). Lessons learned include: Appropriate governing structures that included all relevant stakeholders, at both national and local level, empowered, project management unit and the proactive involvement of communities in the management of natural resources (TE, p.9).

86. The overall goal of the Ethiopia (GEF-ID 4222, LDCF; IEO 2018a) project was to catalyze innovative adaptation actions in the context of Ethiopia's NAPA and development policies and strategies. Farmers adopted five different agricultural based technologies that adapted better water management practices to irrigate about 1800 hectares of farm plots. About 44 percent of female and 59 percent of male farmers effectively used early warning climate information to prepare for the sowing and harvest seasons. Awareness generated from these climate info bulletins, helped beneficiaries increase agricultural productivity by 100 percent. The project had the ability to pilot a scale up vision through immediate, short and longer-term adaptation measures linked to development goals, needs and actions. Moreover, the project demonstrates capability to convince key stakeholders to join and meet a significant demand for adaptation of the most vulnerable communities in Woredas and Kebeles (TE, p.9).

Innovative Projects with Moderately Unsatisfactory Outcome Scores

87. The Climate Resilient Infrastructure project in Vietnam (GEF ID 3103, SCCF; IEO 2018a) introduced practical technical innovations in rural infrastructure. Bioengineering methods involving riverbank protection and roadside slope stabilization and drainage control were demonstrated at four sites and provide practical examples of cost-effective alternatives to addressing slope instability and soil erosion could be considered innovative. The TE noted however that the project has not identified any strong change agents in government or financing partners that are willing to lead the necessary reforms for climate resilient infrastructure investment, which diminishes the prospect for sustainability (IEO 2018a). Lessons learned include assessing the government policy and operational standards and procedures, and mainstreaming requirements, that may need revisions at an early stage and establish inter-sector work groups (TE, p.32).

88. The Ghana project (GEF ID 3218, SCCF; IEO 2018a) proposed an alternative scenario in which GEF funds are used strategically to develop systems and response mechanisms to strengthen the integration of climate change risks into the health sector. Critical barriers were to shift the response capacity of the health sector in Ghana from being reactive towards being more anticipatory, deliberate and systematic (TE, p.13). There is no convincing argument that the outputs would lead to the outcomes. The TE report further states that some items seem to be missing from the logical framework. There is no strong evidence that planning documents have utilized lessons learned/recommendations from previous Projects as inputs to planning and defining the Project strategy (TE, p.21). Project implementation has been challenging (TE, p.25). Overall, there is evidence that adaptive management has occurred during Project

implementation, which contributed to some of the Project successes. However, there is little evidence that those decisions were taken based on a formal discussion and approval by the Project Steering Committee (PSC), although some of the changes made have been approved through annual work plans and were therefore implemented without waiting for the next PSC meeting. The poor quality of PSC minutes may also explain this lack of evidence (TE, p.27).

89. The major innovation in the Ghana project (GEF ID 4368, SCCF), part of the AER 2018 cohort, was meant to have been the introduction of the biogas energy plant. This activity was aimed at reducing waste from the cassava processing chain in the form of cassava peels but also to use sawdust to generate energy and operate the cassava gasification plant instead of diesel and firewood. The combined gasification and biogas plants would have been able to generate energy in the form of electricity, hot air and gas. The energy that is to be generated by the gasification plant would need to be utilized immediately while that of the biogas plant would have been stored and utilized when required. This would have been a major innovation for Ghana, and had it been implemented, which it was not, it would have been a regional showcase of this technology. The project did however introduce innovative high yielding cassava varieties that have been demonstrated in peer-reviewed research to have increased yields and productivity (TE, p.13). The project also contributed to the scientific knowledge surrounding climate smart agricultural innovations (TE, p.20). However, the project did not make use of a logical framework to help it track its achievements and stated outcomes. This had to be created in retrospect during the terminal evaluation process and is reflective of a generally underperforming project in terms of planning and coordination and has been pointed out during the supervision missions (TE, p.5).

Non-Innovative Projects with Satisfactory Outcome Scores

90. The Niger (GEF ID 3319, LDCF; IEO 2015) project's primary aim was to boost the capacity of the agricultural and water sectors in Niger to adapt to climate change. The Project promoted a genuine quality-based approach at organizational level. This has yielded results. Support from all the technical departments and capacity strengthening partners underpins this approach (TE, p.49). However, no innovations or good practices were identified in this project.

91. The Haiti project (GEF-ID 4447, LDCF), part of the AER 2018 cohort, aimed to develop the resilience of vulnerable Haitian farmers by strengthening livelihood resilience and agro-systems against the impacts of climate variability. No innovations or good practices were identified in this project. However, the project contributed to increase agricultural production, which has been enhanced through project activities, evidenced at least partly by higher yields. The level of improvement in productivity is supported by data on the adoption rate. Project activities have effectively trained farmers at each visited site. Attention was paid to climatic hazards and storage techniques. Farming has been strengthened by post-harvest actions, which in turn help stabilize commodity prices, the development of subsistence, conservation and export agriculture (TE, p.28).

Non-Innovative Projects with Moderately Unsatisfactory Outcome Scores

92. The Sudan project (GEF ID 3430, LDCF; IEO 2016) was rated moderately unsatisfactory, because the intended results in two outcome areas were not achieved. Further, the project "did not develop new understanding, new knowledge or new technologies […] It made little contribution to better understanding of lessons learned and emerging best practices" (TE, p.41). No innovative practices were identified in the TE report.

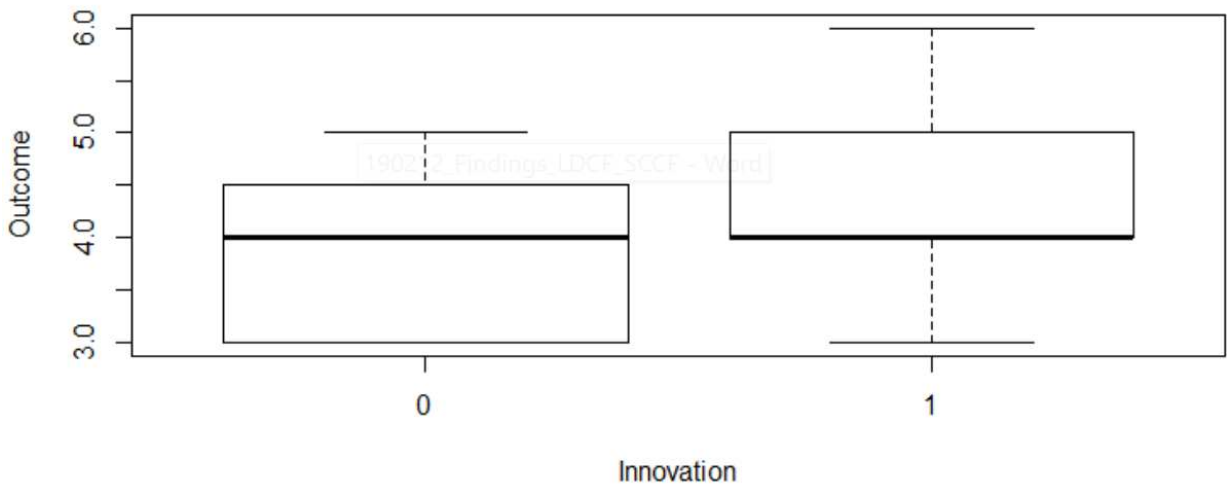
93. The Maldives project's (GEF ID 3847, LDCF; IEO 2017) purpose was the integration of climate change risk into resilient island planning, with a focus on capacity development, policy support and climate risk reduction measures. The project was ineffective in reaching planned results, with three of the project's four outcomes were rated moderately to highly unsatisfactory, and due to numerous delays and poor project planning the project also received a moderately unsatisfactory rating on efficiency. The TE report rates the project's knowledge management and learning component as highly unsatisfactory. No innovations or good practices were identified in this project.

Relationship between Innovation and Outcome

94. Spearman's Rank Correlation was used to determine if innovation and outcome variables are correlated. The correlation coefficient is small and positive *($r_s = 0$.2, $p = 0.17$)*, indicating that there is a weak positive correlation between the two variables; Rho is positive, therefore, outcomes (Y) tend to increase when innovation (X) increases. Based on the correlation coefficient, innovative projects correlate with higher outcomes.

95. The Jaccard Similarity Index for the datasets on innovation and outcome ratings is 0.76, showing high similarity between the datasets of the two variables. Figure 9 below shows the distribution of the data.

Figure 9: Innovation and Outcomes Boxplot



2. Outcomes and Fragility

96. This section addresses the potential impact of a country's fragility on project outcomes, specifically through the following question: How do outcomes in fragile countries compare to those in non-fragile countries?

97. Table 10 provides an overview of all projects' fragility and outcome ratings. Out of the 36 non-fragile projects, 30 (58%) were rated in the satisfactory range while six (11%) were in the unsatisfactory range. Two (4%) of the projects in non-fragile countries received a highly satisfactory outcome rating. Out of the 17 (32%) projects in fragile countries, 12 (23%) received ratings in the satisfactory range and five (10%) were rated in the unsatisfactory range. None of the projects in fragile countries received highly satisfactory outcome ratings.

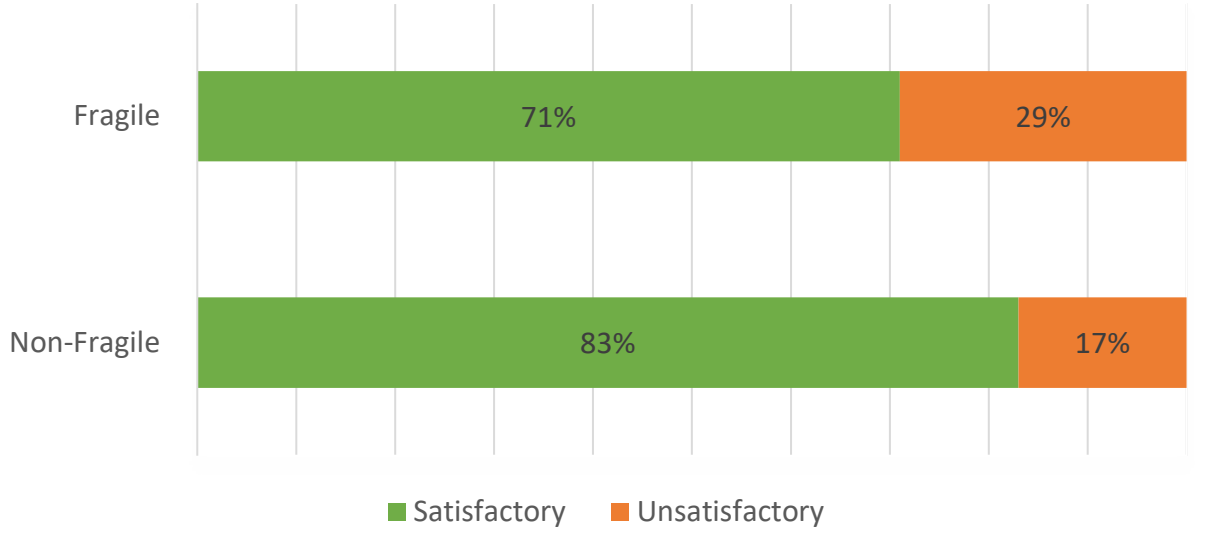
Table 10: Fragility and Outcome Ratings

	Highly Unsatisfactory		Unsatisfactory		Moderately Unsatisfactory		Moderately Satisfactory		Satisfactory		Highly Satisfactory		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Non-Fragile	0	0%	0	0%	6	11%	16	30%	12	23%	2	4%	**36**	**68%**
Fragile	0	0%	0	0%	5	10%	2	4%	10	19%	0	0%	**17**	**32%**
Total	**0**	**0%**	**0**	**0%**	**11**	**21%**	**18**	**34%**	**22**	**42%**	**2**	**4%**	**53**	**100%**

Note: None of the SCCF projects took place in fragile countries. Therefore, the analysis was not split between LDCF and SCCF projects.

98. Figure 10 below shows that 83 percent of projects in non-fragile countries had outcome ratings in the satisfactory range. In comparison, only 71 percent of projects in fragile countries received outcome ratings in the satisfactory range. The discussion below highlights the more explicit cases.

Figure 10: Outcomes of Projects in Fragile and Non-fragile Countries



Projects in Non-fragile Countries with Highly Satisfactory Outcome Scores

99. The Community-Based Adaptation to Climate Change through Coastal Afforestation project in Bangladesh (GEF-ID 3287, LDCF; IEO 2018a) was in line with country priorities, effective and efficient in reaching project results, applied an adaptive management approach, and had a strong and inclusive project partnership structure (p.4). Lessons learned include: Appropriate governing structures that included all relevant stakeholders, at both national and local level, empowered project management unit and the proactive involvement of communities in the management of natural resources (TE, p.9).

Projects in Non-fragile Countries with Moderately Unsatisfactory Outcome Scores

100. The Integrating Climate Change Risks into Water and Flood Management (WFM) by Vulnerable Mountainous Communities in the Greater Caucasus Region of Azerbaijan project (GEF ID 4261, SCCF; IEO 2018a) aimed to strengthen technical capacities and demonstrations in water and flood management practices. The WFM project has partially achieved the project objective and the three planned outcomes. A key challenge for achieving many of the results (particularly Output 2.3) is the problems that project faced in relation to data quality and availability. During project development it was apparently assumed that hydro-meteorological data would be readily available, and of sufficient quality to effectively carry out project activities such as modeling, and flood risk mapping. However, during project implementation this proved to be an incorrect assumption on multiple fronts (TE, p.38).

101. The Ghana project (GEF ID 4368, SCCF) part of the AER 2018 cohort, did not make use of a logical framework to help it track its achievements and stated outcomes. This had to be created in retrospect during the terminal evaluation process and is reflective of a generally underperforming project in terms of planning and coordination and has been pointed out during the supervision missions (TE, p.5).

Projects in Fragile Countries with Satisfactory Outcome Scores

102. The Congo DR project (GEF ID 3718, LDCF; IEO 2016) is a response to the increased variability induced by climate change in different agro-climatic zones, and its impacts on the agricultural sector in the DRC. The immediate objective of the project is to reduce vulnerability among small farmers and rural populations to the effects of climate change on storm farming systems and food security. Overall, the 3 main project results were achieved and that; despite some difficulties that marred the project. Some expected project effects appeared ambitious considering the available resources and time available because either they require certain prerequisites or that they could not achieve in an isolated context (TE, p.29). The project helped to reduce vulnerability in rural populations in four selected sites (TE, p.18). The Project Identification Form (PIF) identifies the following risks: Weak mobilization of co-financing due to the country's post conflict political-administrative situation. Due the high level of planned decentralization, the proposed measures may not perform well in all regions of the DRC territory (PIF, p.8).

103. The Development Strategies for Coastal Communities project (GEF ID 3733, LDCF; IEO 2018a) has delivered most of the planned outcomes. The project has achieved its objective by increasing the resilience of low-elevation coastal zones to emerging climate change threats enhanced and the institutional capacity to plan for and respond to climate induced impacts in coastal areas. Minor shortcomings have been observed in project results (TE, p.50). Under the impact of the project, local governmental sectors, academic institutions, NGOs and some communities said to the evaluator that they will continue to use the products from the project. The local communities which are engaged in development of alternative agricultural practices and reforestation and have benefited from the project will voluntarily support the efforts of adaptation led by local governments. Yet, political instability can greatly alter project outcomes, as it was observed at departmental level when department officers were replaced. The sustainability of achievements will highly depend on the country's political context in the coming years (TE, p.62).

104. The Gambia project (GEF ID 3728, LDCF; IEO 2016) focused on strengthening climate early warning systems. The project's intended outcomes were delivered and were designed to feed into a continuing process. The upgraded and equipped hydrometeorological network and the trained and retained meteorological staff are already delivering reliable and accurate climate information and early warnings to users. There is evidence of increased confidence in climate information and early warning messages by communities in the pilot sites. The effectiveness of climate mainstreaming studies and lessons learnt resulted into the core teams in sectors that are trained on integration of climate change into policy and development

planning. By bringing policy makers together to integrate climate change into policy, the project was effective in enhancing the government's preparedness to respond to climate risks and vulnerabilities (TE, p.11).

105. The objective of the project in Mali, Enhancing Adaptive Capacity and Resilience to Climate Change in the Agriculture Sector (GEF ID 3776, LDCF; IEO 2018a) was to enhance adaptive capacities of vulnerable rural populations to the additional risks posed by climate change on agricultural production and food security. The solutions to address the impacts of climate change on the agricultural sector were identified in a participatory way with the beneficiaries and are deemed effective in terms of the results collected from the beneficiary communes (TE, p.25).

106. The Lao PDR project (GEF ID 4034, LDCF; IEO 2017) focused on minimizing food insecurity from climate change and farmers' vulnerability to extreme flooding and drought events, through an applied ecosystem approach. The objective and the four outcomes were logical and complimentary. Most of the target sets were realistic, achievable and, achieved (TE, p.19).

107. The overall objective the Mali (GEF ID 3979, LDCF) part of the AER 2018 cohort, project was to enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming. Ownership of the project by the country is very satisfactory in technical and operational terms, and moderately satisfactory in political and financial terms. Development and training in CCA approaches are medium and long-term investments, that also benefit from the setting up of many other programs and projects. The evaluation team interlocutors were almost unanimous in stating that there should be a sequel to this well-conceived, well established and well-coordinated program (TE, p.43). The PIF describes that the risk of non-compliance by all primary proponents is medium (PIF, p.7).

Projects in Fragile Countries with Moderately Unsatisfactory Scores

108. The TE of the Coastal Areas and Community Settlements project in Tuvalu (GEF ID 3694, LDCF; IEO 2018a) concludes that the decentralized implementation of a project that covers a wide geographic area within a complex environmental, political, institutional and social matrix presents significant institutional and operational challenges, and the project delivery model should be cognizant of this complexity.

109. The TE of the Guinea Vulnerable Coastal Zones project (GEF ID 3703, LDCF; IEO 2018a) concludes that project achievements and outcomes, even the most successful ones, such as market gardening and reforestation, have not generated the expected impact on targeted communities. This is largely due to a weak leadership, which should be able to enhance these successes, create a ripple effect and subsequently initiate a change in the behavior of local communities. The TE suggests creating a leadership who can initiate change in local communities' behavior (TE, p.30). Adaptation to climate change will be more effective when it

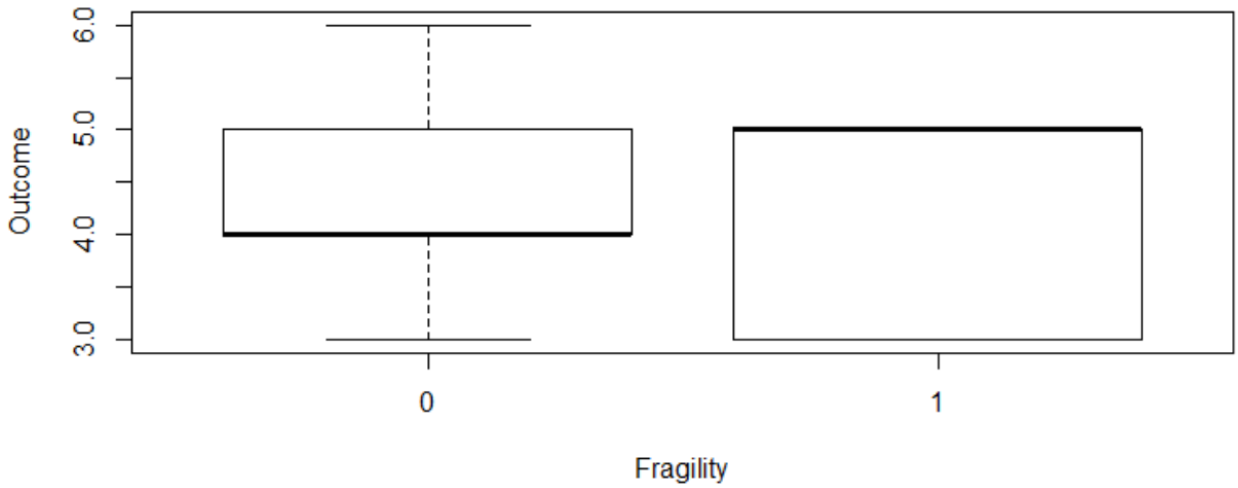
departs from a bottom-up approach (IEO 2018a, p.16). Lessons learned include: Although local communities are aware of the need to preserve environment, it is not obvious that they will change their behavior if they do not have a profitable income-generating alternative. If the project's achievements are not institutionalized and integrated into a decision-making process, they will not be sustainable (TE, p.8).

Relationship between Fragility and Outcome

110. Spearman's Rank Correlation was used to determine if the fragility and outcome variables are correlated. The correlation coefficient between the two variables is very small and positive ($r_s = 0.05$, $p = 0.73$), indicating a very weak positive correlation between the two variables. The positive correlation indicates that as fragility (X) increases, outcomes (Y) tend to increase with it. However, keep in mind that there is only a very weak positive correlation and this finding could also be due to the skewedness in the data; there are much more projects in non-fragile countries than in fragile countries.

111. The Jaccard Similarity Index for non-fragility and outcome is 0.63, showing high similarity between the two variables. This could be interpreted that while there is no correlation, there might be a third variable through which the variables are highly similar. Figure 11 below shows the distribution of the data.

Figure 11: Fragility and Outcomes Boxplot



3. Factors Contributing to Overall Higher Outcome or Sustainability Ratings

112. This section analyzes the relationship among all rated variable in relation to outcomes and sustainability, specifically through the following questions:

- Which variables (if any) lead to higher overall outcomes?
- Which variables (if any) lead to better sustainability ratings?

- Are there linkages and trends that can be identified among the measured variables?

Outcomes

113. Table 11 below describes the statistical significance of the values regressed on outcome. The model's P-value is smaller than 0.05 therefore the findings overall are statistically significant (alpha 0.05). However, only the P-value for the tested variables M&E implementation rating and fragility are below 0.05 and, therefore, statistically significant.

Table 11: Regression on Outcome

P-Value			**2.87e-05**	
R^2			**0.42**	
Variable	**Coefficient**	**Standard Error**	**P-value**	**Statistically significant difference**
Sustainability	0.21	0.12	0.08	No
M&E design rating	0.06	0.09	0.54	No
M&E implementation rating	0.38	0.09	6e-05	Yes
Gender rating at entry	-0.04	0.14	0.79	No
Gender rating at completion	0.28	0.14	0.06	No
Fragility	0.47	0.22	0.04	Yes
Innovation	0.41	0.28	0.15	No

114. The interpretation of the slope coefficients in a regression analysis is that a one-unit change in the independent variable results in the respective regression coefficient change in the expected value of the dependent variable while all the predictors are held constant.

115. The R^2 for this model tells us that 42 percent of the variation in the data can be explained by this model. The R^2 is relatively high but there still might be omitted variable bias, meaning there is another variable that may be correlated.

116. Table 12 shows the Jaccard Similarity Index for the variables in relation to outcomes. The table shows that higher outcomes are highly similar to innovation and satisfactory sustainability ratings. In addition, higher outcomes are also highly similar to scoring higher on M&E implementation and non-fragility when comparing the datasets. However, improved gender ratings and higher outcome ratings have low similarity. Similarly, improved M&E ratings and satisfactory outcome ratings have very low similarity.

Table 12: Jaccard Similarity Index

Variables	Jaccard Index	Strength
Non-fragility and satisfactory outcome ratings	0.63	High
Innovation and satisfactory outcome ratings	0.76	High
Satisfactory M&E implementation ratings and satisfactory outcome ratings	0.64	High
Higher sustainability ratings and satisfactory Outcome ratings	0.73	High
Improved gender ratings—from gender at entry to gender at completion rating—and satisfactory outcome ratings	0.36	Low
Improved M&E ratings—from M&E design to M&E implementation rating—and satisfactory Outcome ratings	0.14	Very Low

117. The Jaccard Similarity Index compares members for two data sets to see which members are shared and which are distinct. The more similar the two populations are, the better they can be compared. The high similarity for outcomes and non-fragility and outcomes and satisfactory M&E implementation in the Jaccard Similarity Index are also supported by the regression analysis in table 11, where fragility and M&E implementation were found to be the only variables of statistical significance in relation to outcomes.

Outcomes and Change in Gender Ratings

118. This section addresses the potential impact of changes in gender ratings on project outcomes, specifically through the following question: Does a change in gender rating—from gender rating at entry to gender rating at completion—have an impact on outcomes?

119. Table 13 provides an overview of all projects' change in gender ratings relative to outcome ratings. Eighty-nine percent of projects with improved gender rating received outcome ratings in the satisfactory range in comparison to 80 percent of projects with similar gender ratings and 66 percent of projects with decreased gender ratings. Only 11 percent of

projects with improved gender ratings received moderately unsatisfactory outcome ratings compared to 20 percent and 33 percent for similar and decreased gender ratings respectively. None of the projects with similar or decreased gender rating received highly satisfactory outcome ratings.

Table 13: Change in gender rating from entry to completion vs. outcome rating

	Outcome rating						
	Highly unsatis-factory	Unsatis-factory	Moderately unsatisfactory	Moderately satisfactory	Satis-factory	Highly satis-factory	Total
Improved gender rating			11%	39%	39%	11%	100%
Similar gender rating			20%	30%	50%		100%
Decreased gender rating			33%	33%	33%		100%

120. Spearman's Rank Correlation was used to determine if the change in gender rating and outcome rating are correlated. The correlation coefficient between the two variables is small and positive ($r_s = 0.20$, $p = 0.15$), indicating a weak positive correlation between the two variables.

121. In the regression analysis, gender at entry and completion was not found to affect project outcomes. The Jaccard Similarity Index showed low similarity between improved gender ratings and satisfactory outcome ratings. Despite weak positive statistical correlation, the analysis shows that projects that maintained or improved on gender ratings had better outcome ratings overall. As shown in table 7, projects that maintained or improved gender ratings also had poorer at entry ratings. Individual analysis of the Funds showed that LDCF projects had a much higher rate of projects with declining gender rating from gender rating at entry to completion (39%). For the SCCF projects, only 14 percent of projects had lower ratings at entry than at completion.

Outcomes and Change in Monitoring and Evaluation Ratings

122. This section addresses the potential impact of changes in M&E ratings on project outcomes, specifically through the following question: Does a change in M&E ratings have an impact on outcomes?

123. Table 14 provides an overview of all projects' change in M&E ratings relative to outcome ratings. Eighty-six percent of projects with improved M&E rating received outcome ratings in the satisfactory range in comparison to 78 percent of projects with similar M&E ratings and 77 percent of projects with decreased M&E ratings. Only 14 percent of projects with improved M&E ratings received moderately unsatisfactory outcome ratings, compared to 21 percent and

23 percent for similar and decreased M&E ratings respectively. None of the projects with decreased M&E rating received highly satisfactory outcome ratings.

Table 14: Change in rating from M&E design to M&E implementation vs. outcome rating

	Outcome rating						
	Highly unsatis-factory	Unsatis-factory	Moderately unsatisfactory	Moderately satisfactory	Satis-factory	Highly satis-factory	Total
Improved M&E rating			14%	29%	43%	14%	100%
Similar M&E rating			21%	27%	48%	3%	100%
Decreased M&E rating			23%	54%	23%		100%

124. Spearman's Rank Correlation was used to determine if the change in M&E rating from design to implementation and outcome variables are correlated. The correlation coefficient between the two variables is very small and positive ($r_s = 0.23$, $p = 0.09$), indicating a very weak positive correlation between the two variables.

125. In the regression analysis, M&E implementation was found to affect project outcomes. The Jaccard Similarity Index showed very low similarity between improved M&E ratings and satisfactory outcome ratings. Despite weak positive statistical correlation, the analysis shows that projects that maintained or improved on M&E ratings had better outcome ratings overall. However, as shown in table 8, projects that maintained or improved M&E ratings already had M&E ratings in the satisfactory range.

Sustainability

126. Table 15 below shows that there is no statistical significance for any of the tested variables; none of the P-values for the tested variables is smaller than 0.05 and as such they—statistically—did not have an effect on sustainability. The interpretation of the slope coefficients in a regression analysis is that a one-unit change in the independent variable results in the respective regression coefficient change in the expected value of the dependent variable while all the predictors are held constant.

127. The R^2 for this model tells us that 21 percent of the variation in the data can be explained by this model. The R^2 tells us there might be omitted variable bias, meaning there is another variable that may be correlated but not measured in this model.

Table 15: Regression on Sustainability

P-Value			**0.13**	
R^2			**0.21**	
Variable	**Coefficient**	**Standard Error**	**P-value**	**Statistically significant difference**
Outcomes	0.31	0.17	0.08	No
M&E design rating	-0.11	0.11	0.35	No
M&E implementation rating	0.005	0.13	0.97	No
Gender at Entry	-0.04	0.16	0.79	No
Gender at Completion	0.21	0.18	0.24	No
Fragility	-0.3	0.27	0.28	No
Innovation	0.24	0.35	0.50	No

128. Table 16 shows the Jaccard Similarity Index for the variables in relation to sustainability. The table shows that higher sustainability is highly similar to innovation and satisfactory outcome ratings. However, higher sustainability ratings are only moderately similar to higher M&E implementation ratings, non-fragility and improved gender ratings when comparing the datasets. Higher sustainability has low similarity to improved M&E ratings.

Table 16: Jaccard Similarity Index

Variables	Jaccard Similarity Index	Strength
Non-fragility and higher sustainability ratings	0.54	Moderate
Innovation and higher sustainability ratings	0.63	High
Satisfactory M&E implementation ratings and higher sustainability ratings	0.45	Moderate
Satisfactory outcome ratings and higher sustainability ratings	0.73	High
Improved Gender ratings and higher sustainability ratings	0.44	Moderate
Improved M&E ratings and higher sustainability ratings	0.21	Low

129. The Jaccard Similarity Index compares members for two data sets to see which members are shared and which are distinct. The more similar the two populations are, the better they can be compared. However, despite high similarity between some variables, none of the variables in the regression analysis in table 15 were found to affect sustainability ratings.

Sustainability and Change in Gender Ratings

130. This section addresses the potential impact of changes in gender ratings on project sustainability, specifically through the following question: Does a change in gender ratings have an impact on sustainability?

131. Table 17 provides an overview of all projects' change in gender ratings relative to sustainability ratings. Eighty-nine percent of projects with improved gender rating received sustainability ratings in the satisfactory range in comparison to 45 percent of projects with similar gender ratings and 60 percent of projects with decreased gender ratings. Only 11 percent of projects with improved gender ratings received moderately unlikely sustainability ratings compared to 55 percent and 27 percent for similar and decreased gender ratings respectively.

Table 17: Change in gender rating from entry to completion vs. sustainability rating

	Sustainability rating					Total
	No rating	Unlikely	Moderately unlikely	Moderately likely	Likely	
Improved gender rating			11%	61%	28%	100%
Similar gender rating			55%	35%	10%	100%
Decreased gender rating			27%	53%	7%	87%

132. Spearman's Rank Correlation was used to determine if the change in gender rating and sustainability rating are correlated. The correlation coefficient between the two variables is small and positive ($r_s = 0.33$, $p = 0.02$), indicating a moderate to weak positive correlation between the two variables.

133. In the regression analysis, gender rating at entry and gender rating at completion was not found to affect project sustainability. The Jaccard Similarity Index showed moderate similarity between improved gender ratings and higher sustainability ratings. Despite moderate to weak positive statistical correlation, the analysis shows that projects that improved in gender ratings had better sustainability ratings overall. However, projects with decreased gender ratings overall scored higher in sustainability ratings than projects which maintained gender ratings. This result could be due to the relationship between improvement in gender rating and sustainability working through a third variable, which could be the project outcome rating.

134. As shown in table 7, projects that maintained or improved gender ratings also had poorer at entry ratings. Individual analysis of the funds showed that LDCF projects had a much higher rate of projects with declining gender rating from entry to completion (39%). For the SCCF projects, only 14 percent of projects had lower ratings at entry than at completion.

Sustainability and Change in Monitoring and Evaluation Ratings

135. This section addresses the potential impact of changes in M&E ratings on project outcomes, specifically through the following question: Does a change in M&E ratings have an impact on sustainability?

136. Table 18 provides an overview of all projects' change in M&E ratings relative to sustainability ratings. One hundred percent of projects with improved M&E rating received sustainability ratings in the likely range in comparison to 60 percent of projects with similar M&E ratings and 53 percent of projects with decreased M&E ratings. None of the projects with improved M&E ratings received moderately unlikely sustainability ratings compared to 33 percent and 46 percent for similar and decreased M&E ratings respectively.

Table 18: Change in M&E rating from design to implementation vs. sustainability rating

	Sustainability rating					Total
	No rating	Unlikely	Moderately unlikely	Moderately likely	Likely	
Improved M&E rating			0%	86%	14%	100%
Similar M&E rating			33%	45%	15%	100%
Decreased M&E rating			46%	38%	15%	100%

137. Spearman's Rank Correlation was used to determine if the change in M&E rating and sustainability rating are correlated. The correlation coefficient between the two variables is small and positive ($r_s = 0.18$, $p = 0.19$), indicating a weak positive correlation between the two variables.

138. In the regression analysis, evaluation at design and implementation was not found to affect project sustainability. The Jaccard Similarity Index showed low similarity between improved M&E ratings and higher sustainability ratings. Despite weak positive statistical correlation, the analysis shows that projects with maintained or improved in M&E ratings had better sustainability ratings overall. However, a change in M&E ratings did not affect projects which achieved likely sustainability ratings. As shown in table 8, projects that maintained or improved M&E ratings already had M&E design ratings in the satisfactory range.

VI. SYNTHESIS

139. This section provides an overview and, where appropriate, and interpretation of findings of the quantitative and qualitative analysis of the 53 reviewed projects.

Outcomes and Sustainability

140. Overall, the LDCF and SCCF funds performed well with respect to project outcomes and sustainability. A total of 79 percent of projects received outcome ratings in the satisfactory range while the other 21 percent received a moderately unsatisfactory outcome rating. Ninety one percent of SCCF projects and 84 percent of LDCF projects received outcome ratings in the satisfactory range.

141. A project in Bangladesh (GEF ID 3287, LDCF; IEO 2018a) which received a highly satisfactory rating, showed that including stakeholders at national and local levels empowered the proactive involvement of communities in the management of natural resources. A project in Guinea (GEF ID 3703, LDCF; IEO 2018a), which received a moderately unsatisfactory outcome rating, determined that strong leadership is necessary to achieve the expected impact on the community.

142. A total of 64 percent of projects received sustainability ratings in the likely range while 34 percent received ratings in the unlikely range. Seventy three percent of all SCCF projects had a sustainability rating in the likely range, while only 60 percent of rated LDCF projects had sustainability ratings in the likely range.

143. A project in Ecuador (GEF ID 2931, SCCF; IEO 2016), which received a likely sustainability rating, found that designing field projects with the community created commitment on the part of all stakeholders by supporting actions towards sustainability with equity. A project in Djibouti (GEF ID 3408, LDCF; IEO 2018a), which received an unlikely sustainability rating, found that it would have been better to address sustainability in the project design stage so that activities can be focused on developing sustainability mechanisms.

Innovation

144. Overall, the projects performed well in regard to innovative approaches. Innovative activities were often highlighted and discussed in project documents. In total, eighty-seven percent of projects showed clear innovative elements and were rated innovative, while 13 percent did not show innovative elements and were rated non-innovative. SCCF projects had 91 percent of projects rated innovative compared to 84 percent of LDCF projects.

145. The project in Ethiopia (GEF ID 4222, LDCF; IEO 2018a) found that awareness generated from climate information bulletins helped beneficiaries increase productivity by 100 percent. This innovative project had the ability to scale-up through immediate, short and longer-term adaptation measures linked to development goals, needs and actions. Despite innovative elements, the Ghana project (GEF ID 4368, SCCF) from the 2018 cohort failed to use a logical framework to help it track its achievements and stated outcomes.

Fragility

146. A majority of projects (68 percent) took place in non-fragile countries while 32 percent of projects were implemented in fragile countries. All the projects in fragile countries were funded by the LDCF, making up 55 percent of the LDCF portfolio for this cohort.

147. Further, 83 percent of projects in non-fragile countries had outcome ratings in the satisfactory range. In comparison, only 71 percent of projects in fragile countries received outcome ratings in the satisfactory range. Note that all SCCF projects were implemented in non-fragile countries. While there was a very weak correlation between a country's fragility and a project's outcome rating, there was a high similarity (Jaccard Similarity Index of 0.63) between the variables country's non-fragility and project outcome rating. This could be interpreted that while there is no correlation, there might be a third variable through which the variables interact. A review of project documents revealed that risks associated with a country's fragility were rarely discussed.

148. The Congo DR project (GEF ID 3718, LDCF; IEO 2016), which is rated fragile, found that despite some difficulties that marred the project, the project helped to reduce vulnerability of

rural populations in selected sites. This project was one of the only projects that addressed the risks such as the country's difficult post conflict political-administrative situation in the PIF. A coastal communities project (GEF ID 3733, LDCF; IEO 2018a) found that political instability can greatly alter project outcomes, as was observed in this project when department officers were replaced. The TE acknowledges that the sustainability of achievements for this project will greatly depend on the country's political context in the coming years. The project in Guinea (GEF ID 3703, LDCF; IEO 2018a) found that adaptation to climate change will be more effective when it departs from a bottom-up approach. If the project's achievements are not institutionalized and integrated into a decision-making process, they will not be sustainable.

M&E Ratings

149. Overall, the projects performed satisfactory in regard to M&E ratings at design and implementation. For M&E design, 64 percent of projects received ratings in the satisfactory range while 34 percent of projects received ratings in the unsatisfactory range. For M&E implementation, 58 percent of projects received ratings in the satisfactory range while 38 percent of projects received ratings in the unsatisfactory range. The data shows that 62 percent of projects had a similar M&E design and M&E implementation rating, while 13 percent improved, and 25 percent received a lower rating on M&E implementation compared to M&E design. Differences between LDCF and SCCF on changes in M&E rating from design to implementation are rather small.

150. Analysis of a project in Bangladesh (GEF ID 3287, LDCF; IEO2018a) showed that efficient and systematic recording of relevant information and on progress of activities can lead to an increase in M&E ratings. The project in Sierra Leone (GEF ID 3716, LDCF), which received decreasing ratings from moderately satisfactory at M&E design to an unsatisfactory rating at M&E implementation, found that better monitoring and evaluation would have spotted underperforming activities and would have increased accountability and saved more money to be invested elsewhere.

Sustainability

151. Statistically, none of the tested variables in the regression analysis[9] were found to be correlated to the sustainability of project outcomes. However, there was a high similarity between project outcomes and sustainability (Jaccard Similarity Index of 0.76); outcomes ratings in the satisfactory range tend to align with sustainability ratings in the likely range. There was also a high similarity between project sustainability and innovation (Jaccard Similarity Index of 0.63). However, higher sustainability ratings are moderately similar to higher M&E implementation ratings (Jaccard Similarity Index of 0.45), non-fragility (Jaccard Similarity Index of 0.54) and improved gender ratings (Jaccard Similarity Index of 0.44) when comparing

[9] The variables being a country's fragility, project innovation, project outcome rating, M&E implementation rating, improvements in M&E rating from entry to implementation, and improvements in gender rating from entry to completion.

the datasets. Higher sustainability has low similarity to improved M&E ratings (Jaccard Similarity Index of 0.21).

152. Eighty-nine percent of projects with improved gender rating received sustainability ratings in the satisfactory range in comparison to 45 percent of projects with similar gender ratings and 60 percent of projects with decreased gender ratings. Only 11 percent of projects with improved gender ratings received moderately unlikely sustainability ratings compared to 55 percent and 27 percent for similar and decreased gender ratings respectively. Despite moderate to weak positive statistical correlation, the analysis shows that projects that improved gender ratings had better sustainability ratings overall. However, projects with decreased gender ratings overall scored higher in sustainability ratings than projects which maintained gender ratings. This could be due to the relationship between improvement in gender rating and sustainability working through a third variable, which could be the project outcome rating.

153. One hundred percent of projects with improved M&E rating received sustainability ratings in the likely range in comparison to 60 percent of projects with similar M&E ratings and 53 percent of projects with decreased M&E ratings. None of the projects with improved M&E ratings received moderately unlikely sustainability ratings compared to 33 percent and 46 percent for similar and decreased M&E ratings respectively.

Outcomes

154. The analysis found that 83 percent of projects with innovative elements had outcome ratings in the satisfactory range, while only 57 percent of non-innovative projects received outcome ratings in the satisfactory range. Statistically, there was a weak positive correlation between innovation and project outcomes and a high similarity (Jaccard Similarity Index of 0.76) between data on innovation and project outcome ratings.[10] Innovation was found to be especially impactful in projects funded through the SCCF fund, in which 91 percent of the innovative projects had satisfactory outcomes. This finding is positive but not surprising as innovation is one of the SCCF's main pillars.

155. M&E implementation ratings and fragility were statistically found to be correlated with project outcome ratings. This finding is also supported by the similarity assessment. Fragility (Jaccard Similarity Index of 0.63) and M&E implementation ratings (Jaccard Similarity Index of 0.64) received high similarity scores in relation to project outcome ratings. Higher outcomes were also highly similar to innovation (Jaccard Similarity Index of 0.76) and satisfactory sustainability ratings (Jaccard Similarity Index of 0.73). However, improved gender ratings and higher outcomes have low similarity (Jaccard Similarity Index of 0.36). Similarly, improved M&E ratings and satisfactory outcome ratings have very low similarity (Jaccard Similarity Index of 0.14).

[10] See annex 1 for a working definition of innovation and annex 2 for complete calculations of Spearman's Rank Correlation and Jaccard Similarity Index.

156. Eighty-six percent of projects with improved M&E rating received outcome ratings in the satisfactory range in comparison to 78 percent of projects with similar M&E ratings and 77 percent of projects with decreased M&E ratings. Only 14 percent of projects with improved M&E ratings received moderately unsatisfactory outcome ratings, compared to 21 percent and 23 percent for similar and decreased M&E ratings respectively.

157. Despite weak positive statistical correlation ($r_s = 0.23$, $p = 0.09$), the analysis shows that projects that maintained or improved on M&E ratings—from M&E design to M&E implementation—had better outcome ratings overall. Most projects that maintained or improved M&E ratings already had M&E at entry ratings in the satisfactory range.

158. Eighty-nine percent of projects with improved gender rating received outcome ratings in the satisfactory range in comparison to 80 percent of projects with similar gender ratings and 66 percent of projects with decreased gender ratings. Projects rated gender blind or gender aware at entry tend to maintain or improve their gender rating at entry during implementation, rating mostly similar or better at completion. Projects rated gender sensitive or gender mainstreamed at entry either maintain or decrease when compared to their gender rating at completion. Of the 15 projects rated gender sensitive at entry, only five maintained that rating while the remaining ten scored lower on gender at completion. The analysis shows that LDCF projects had a much higher rate of projects with declining gender rating from entry to completion (39 percent). For the SCCF projects, only 14 percent of projects had lower ratings from entry to completion.

159. Despite weak positive statistical correlation ($r_s = 0.20$, $p = 0.15$), the analysis shows that projects that maintained or improved on gender ratings had better outcome ratings overall. However, projects that maintained or improved gender ratings also had poorer at entry ratings on gender; since gender was not required to be included or reported on, there was room for improvement

160. Overall, there is a misconnect between gender ratings at entry and completion. Terminal evaluations listed good examples of how gender was addressed in the projects, or a lack thereof. Qualitative analysis of project documents found that, while many projects include gender as a component of their project activities, lessons learned regarding gender are not often addressed in the TE. However, a few projects offered interesting insights. Despite project activities that target women, the Haiti project (GEF ID 4447, LDCF; IEO 2018a) found that a lack of female staff represents a missed opportunity for the project and ultimately contributed to a decrease in gender rating from gender sensitive at entry to gender blind upon completion. The Cabo Verde project (GEF ID 3581, LDCF; IEO 2017), which was rated gender aware at entry and gender blind upon completion, found that the focus on gender cannot be limited to the number of female beneficiaries. A proper gender strategy should analyze gender roles and inequities and work with communities to transform these inequalities

VII. REFERENCES

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VIII. ANNEXES

Annex 1: Rating scales used

Factor	Definition	Rating Scale
Country's Fragility	Fragility rating is based on The World Bank Group's (WBG) annually released Harmonized List of Fragile Situations.	Fragility is rated either yes or no
Outcomes	Outcome ratings are done after project completion and are based on the APR. The calculation of the overall outcomes rating of projects considers all three criteria, of which relevance criterion will be applied first. (1) the overall outcome achievement rating may not be higher than 'unsatisfactory' if the binary relevance rating is 'unsatisfactory'. (2) The second constraint that is applied is that the overall outcome achievement rating may not be higher than the effectiveness rating. (3) The third constraint that is applied is that the overall rating may not be higher than the average rating of effectiveness and efficiency criteria calculated using the following formula: outcomes = (b+c)/2.	Outcomes are rated: highly satisfactory, satisfactory, moderately satisfactory, unsatisfactory, highly satisfactory or unable to assess
Sustainability	The assessment of sustainability will weigh risks to continuation of benefits from the project. The assessment should identify key risks and explain how these risks may affect continuation of benefits after the GEF project ends. The analysis should cover financial, socio-political, institutional, and environmental risks.	Sustainability is rated: likely, moderately likely, moderately unlikely, unlikely or no rating
M&E Design	Was the M&E plan at the point of CEO Endorsement practical and sufficient? Did it include baseline data? Did it: specify clear targets and appropriate indicators to track environmental, gender, and socio-economic results; a proper methodological approach; specify practical organization and logistics of the M&E activities including schedule and responsibilities for data collection; and, budget adequate funds for M&E activities?	M&E design is rated: highly satisfactory, satisfactory, moderately satisfactory, unsatisfactory, highly satisfactory or unable to assess

Factor	Definition	Rating Scale
M&E Implementation	Was the M&E system operated as per the M&E plan? Where necessary, whether the M&E plan was revised in a timely manner? Was information on specified indicators and relevant GEF focal area tracking tools gathered in a systematic manner? Whether appropriate methodological approaches have been used to analyze data? Were resources for M&E sufficient? How was the information from M&E system used during the project implementation?	M&E implementation is rated: highly satisfactory, satisfactory, moderately satisfactory, unsatisfactory, highly satisfactory or unable to assess
Gender Consideration	Gender consideration is assessing whether a project included gender norms, roles, and relationships and strengthens or creates systems that support gender equity.	Gender considerations are rated: gender transformative, gender main-streamed, gender sensitive, gender aware, gender blind, not gender relevant
Innovation	There is no overarching description or definition of what is to be regarded as 'innovation' or 'innovative'. One common denominator in LDCF/SCCF projects is that projects and approaches are regarded as innovative if they are deliberately applied to tackle an issue, and these approaches. (i) have not been used before in the project area, and/or (ii) have not been used before to tackle this specific issue. Other elements that make an approach innovative is that the approach needs to be (iii) widely replicable, which is linked to being locally appropriate from a technological, environmental as well as a socio-economic point of view, and this should be possible (iv) at low economic cost, which links innovation to financial sustainability.	Innovation is rated either yes or no

Annex 2: Statistical Procedures

Spearman's Rank Correlation

Spearman's Rank Correlation provides a measure of a monotonic relationship between two continuous random variables. It is useful with ordinal data and is robust to outliers. The sign of the Spearman Correlation indicates the direction of correlation between the independent variable (X) and the dependent variable (Y). The Spearman correlation coefficient is positive if Y tends to increase when X increases. If Y tends to decrease when X increases, the Spearman correlation coefficient is negative. A Spearman correlation of zero indicates that there is no tendency for Y to either increase or decrease when X increases.

An Alpha level of 0.05 was chosen to test the hypotheses. The significance level α is the probability of making the wrong decision when the null hypothesis is true. An alpha of 0.05 can be interpreted as 95 percent confidence that the analysis is correct.

Bootstrapping

Bootstrapping is a statistical method to quantify uncertainty by re-using the data. Specifically, bootstrapping is drawing n samples from a dataset with replacement. This sample will have n data points drawn from the original set, but some will be represented multiple times and others will not appear at all due to random sampling effects.

Innovation and Outcomes

After bootstrapping the dataset, Spearman's Rank Correlation was used to determine if the innovation and outcome variables are correlated. The correlation coefficient between the two variables is small and positive ($r_s = 0.2$, $p = 0.00$), indicating a weak positive correlation between the two variables. Rho is positive, therefore, outcomes (Y) tend to increase when innovation (X) increases. Based on the correlation coefficient, innovative projects do not achieve higher outcomes

Fragility and Outcomes

After bootsrapping the dataset, Spearman's Rank Correlation was used to determine if fragility and outcome variables are correlated. The correlation coefficient is small and positive ($r_s = -0.05$, $p = 0.14$), indicating that there is a very weak negative correlation between the two variables; the negative correlation indicates that as fragility (X) increases, outcomes (Y) tend to decrease with it. Based on the correlation coefficient, projects in non-fragile countries do not achieve higher outcomes.

Jaccard Similarity Index

The Jaccard Similarity Index compares members for two sets to see which members are shared and which are distinct. It's a measure of similarity for the two sets of data, with a range from 0 percent to 100 percent. The higher the percentage, the more similar the two populations.

Jaccard Similarity Index is calculated by dividing the number of members in both sets by the number of members in either sets.

Annex 3: Coding Keys

Factor	Rating	Code	Definition	Binary Rating
Outcome Ratings	Highly satisfactory	6	The project had no shortcomings.	1
	Satisfactory	5	The project had minor shortcomings.	
	Moderately satisfactory	4	The project had moderate shortcomings.	
	Moderately unsatisfactory	3	The project had noticeable shortcomings.	0
	Unsatisfactory	2	The project had major shortcomings.	
	Highly unsatisfactory	1	The project had severe shortcomings.	
	Unable to assess	0	The reviewer was unable to assess outcomes on this dimension.	
Sustainability Rating	Likely	4	There is little or no risks to sustainability	1
	Moderately likely	3	There are moderate risks to sustainability.	
	Moderately unlikely	2	There are significant risks to sustainability.	0
	Unlikely	1	There are severe risks to sustainability.	
	No Rating	0	Unable to assess the expected incidence and magnitude of risks to sustainability.	

Factor	Rating	Code	Definition
M&E design and imple-mentation	Highly satisfactory	6	There were no short comings and quality of M&E design / implementation exceeded expectations
	Satisfactory	5	There were no or minor short comings and quality of M&E design / implementation meets expectations.
	Moderately satisfactory	4	There were some short comings and quality of M&E design/implementation more or less meets expectations.
	Moderately unsatisfactory	3	There were significant shortcomings and quality of M&E design / implementation somewhat lower than expected.
	Unsatisfactory	2	There were major short comings and quality of M&E design/implementation substantially lower than expected.
	Highly unsatisfactory	1	There were severe short comings in M&E design/ implementation.
	No Rating	0	The available information does not allow an assessment of the quality of M&E design / implementation.
Gender rating	Gender transformative	5	Project goes beyond gender-mainstreaming and facilitates a 'critical examination' of gender norms, roles, and relationships; strengthens or creates systems that support gender equity; and/or questions and changes gender norms and dynamics. Like gender-mainstreamed, but the way gender is addressed might result in behavioral changes towards gender norms and dynamics in the systems targeted by the project.
	Gender mainstreamed	4	Project ensures that gender perspectives and attention to the goal of gender equality are central to most, if not all, activities. It assesses the implications for women and men of any planned action, including legislation, policies or programs, in any area and at all levels. Like gender-sensitive, but there are gender relevant components in most, if not all, activities.

Factor	Rating	Code	Definition
Gender rating	Gender sensitive	3	Project adopts gender sensitive methodologies to address gender differences and promote gender equality. A gender analysis or social analysis with gender aspects is undertaken, gender disaggregated data are collected, gender sensitive indicators are integrated in monitoring and evaluation, and the data collected informs project management. But the gender focus is only apparent in a limited number of project activities.
	Gender aware	2	Project recognizes the economic/social/political roles, rights, entitlements, responsibilities, obligations and power relations socially assigned to men and women, but might work around existing gender differences and inequalities, or does not sufficiently show how it addresses gender differences and promotes gender equality. Gender is mentioned in the project document, but it is unclear how gender equality is being promoted. There might be one or two gender disaggregated indicators, but it is unclear whether and how that data informs project management. Gender might be mentioned in a social assessment, but it is unclear what is done with that information. No gender action plan or gender strategy was developed for the project.
	Gender blind	1	Project does not demonstrate awareness of the set of roles, rights, responsibilities, and power relations associated with being male or female. Gender is not mentioned in project documents beyond an isolated mention in the context description, gender is not tracked by the tracking tools and M&E instruments, no gender analysis took place, no gender action plan or gender strategy was developed for the project.

Factor	Rating	Code	Definition
Gender rating	Not gender relevant	0	Gender plays no role in the planned intervention. (Note that in practice, if a project touches upon the lives of people, either directly or indirectly, it has gender relevance).
Fragility of Country	Fragile	1	The country has been listed on the World Bank Group's (WBG) annually released Harmonized List of Fragile Situations for at least one year during project implementation.
	Non-fragile	0	The country has not been listed on the World Bank Group's (WBG) annually released Harmonized List of Fragile Situations or has been listed for less than one year during project implementation.
Innovation	Innovative	1	Projects and approaches are regarded innovative if they are deliberately applied to tackle an issue, and these approaches (i) have not been used before in the project area, and/or (ii) have not been used before to tackle this specific issue. The approve needs to be (iii) widely replicable, which is linked to being locally appropriate from a technological, environmental as well as a socio-economic point of view, and this should be possible (iv) at low economic cost, which links innovation to financial sustainability.
	Non-innovative	0	Does not fulfill the above criteria.

Annex 4: Overview of Included LDCF/SCCF Projects

GEF ID	Year	Fund	Lead agency	Country	Project Title
2553	AER 2015	SCCF	WHO	Global	Piloting Climate Change Adaptation to Protect Human Health
2832	AER 2013	SCCF	UNDP	Tanzania	Mainstreaming climate change and adaptation into integrated water resource management
2902	AER 2015	SCCF	World Bank	Regional	Adaptation to the Impact of Rapid Glacier Retreat in the Tropical Andes
2931	AER 2015	SCCF	UNDP	Ecuador	Adaptation to Climate Change through Effective Water Governance
3101	AER 2015	SCCF	UNDP	Regional	Pacific Adaptation to Climate Change Project (PACC)
3103	AER 2017	SCCF	ADB/ UNDP	Vietnam	Climate-resilient Infrastructure in Northern Mountain Province of Vietnam
3154	AER 2013	SCCF	UNDP	Ethiopia	Coping with Drought and Climate Change
3155	AER 2014	SCCF	UNDP	Mozambique	Coping with Drought and Climate Change
3156	AER 2013	SCCF	UPDP	Zimbabwe	Coping with Drought and Climate Change
3159	AER 2017	SCCF	World Bank	Mexico	Adaptation to Climate Change Impacts on the Coastal Wetlands
3218	AER 2017	SCCF	UNDP	Ghana	Integrating Climate Change into the Management of Priority Health Risks
3219	AER 2013	LDCF	UNDP	Bhutan	Reducing Climate Change Induced Risks and Vulnerabilities from Glacial Lake Outbursts in the Punakha-Wangdi and Chamkhar Valleys
3227	AER 2015	SCCF	World Bank	Guyana	Conservancy Adaptation
3249	AER 2015	SCCF	UNDP	Kenya	Adaptation to Climate Change in Arid Lands (KACCALI)

GEF_ID	Year	Fund	Lead agency	Country	Project Title
3265	AER 2014	SCCF	World Bank	China	Mainstreaming Adaptation to Climate Change into Water Resources Management and Rural Development
3287	AER 2017	LDCF	UNDP	Bangladesh	Community-Based Adaptation to Climate Change through Coastal Afforestation
3299	AER 2014	SCCF	UNDP	Thailand	Strengthening the capacity of vulnerable coastal communities to address the risk of climate change and extreme weather events
3319	AER 2014	LDCF	UNDP	Niger	Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change
3358	AER 2014	LDCF	UNDP	Samoa	Integrating Climate Change Risks into the Agriculture and Health Sectors in Samoa (ICCRAHS) Project
3404	AER 2014	LDCF	UNDP	Cambodia	Promoting Climate Resilient Water Management and Agriculture Practice in Rural Cambodia
3408	AER 2017	LDCF	UNEP	Djibouti	Implementing NAPA Priority Interventions to Build Resilience in the most Vulnerable Coastal Zones in Djibouti
3430	AER 2015	LDCF	UNDP	Sudan	Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change
3581	AER 2014	LDCF	UNDP	Cabo Verde	Building Adaptive Capacity and Resilience to Climate Change in the Water Sector in Cabo Verde
3679	AER 2013	SCCF	UNEP	Global	Economic Analysis of Adaptation Options
3684	AER 2014	LDCF	UNDP	Burkina Faso	Strengthening Adaptation Capacities and Reducing the Vulnerability to Climate Change in Burkina Faso
3689	AER 2015	LDCF	UNDP	Zambia	Adaptation to the Effects of Climate Variability and Change in Agro-Ecological Regions I and II in Zambia (CCAP)
3694	AER 2017	LDCF	UNDP	Tuvalu	Increasing Resilience of Coastal Areas and Community Settlements to Climate Change

GEF_ID	Year	Fund	Lead agency	Country	Project Title
3703	AER 2017	LDCF	UNDP	Guinea	Increased Resilience and Adaptation to Adverse Impacts of Climate Change in Guinea's Vulnerable Coastal Zones
3704	AER 2016	LDCF	UNDP	Benin	Integrated Adaptation Programme to Combat the Effects of Climate Change on Agricultural Production and Food Security
3716	AER 2018	LDCF	IFAD	Sierra Leone	Integrating Adaptation to Climate Change into Agricultural Production and Food Security
3718	AER 2015	LDCF	UNDP	Congo DR	Building the Capacity of the Agriculture Sector in DR Congo to Plan for and Respond to the Additional Threats Posed by Climate Change on Food Production and Security
3728	AER 2015	LDCF	UNEP	Gambia	Strengthening of the Gambia's Climate Change Early Warning Systems
3733	AER 2017	LDCF	UNDP	Haiti	Strengthening Adaptive Capacities to Address Climate Change Threats on Sustainable Development Strategies for Coastal Communities in Haiti
3776	AER 2017	LDCF	UNDP	Mali	Enhancing Adaptive Capacity and Resilience to Climate Change in the Agriculture Sector in Mali
3838	AER 2015	LDCF	UNDP/UNEP	Rwanda	Reducing Vulnerability to Climate Change by Establishing Early Warning and Disaster Preparedness Systems and Support for Integrated Watershed Management in Flood Prone Areas
3847	AER 2016	LDCF	UNDP	Maldives	Integrating Climate Change Risks into Resilient Island Planning
3857	AER 2017	LDCF	UNDP/UNEP	Comoros	Adapting Water Resource Management in Comoros to Increase Capacity to Cope with Climate Change
3890	AER 2017	LDCF	UNEP	Cambodia	Vulnerability Assessment and Adaptation Programme for Climate Change in the Coastal Zone of Cambodia Considering Livelihood Improvement and Ecosystems
3907	AER 2017	SCCF	UNEP	Global	Technology Needs Assessments

GEF_ID	Year	Fund	Lead agency	Country	Project Title
3934	AER 2017	SCCF	UNDP	South Africa	Reducing Disaster Risks from Wildfire Hazards Associated with Climate Change
3967	AER 2017	SCCF	World Bank	Morocco	Integrating Climate Change in the Implementation of the Plan Maroc Vert Project
3979	AER 2018	LDCF	FAO	Mali	Integrating Climate Resilience into Agricultural Production for Food Security in Rural Areas of Mali
4034	AER 2016	LDCF	UNDP	Lao PDR	Improving the Resilience of the Agriculture Sector in Lao PDR to Climate Change Impacts
4216	AER 2016	LDCF	UNDP	Samoa	Integration of Climate Change Risk and Resilience into Forestry Management (ICCRIFS)
4222	AER 2017	LDCF	UNDP	Ethiopia	Promoting Autonomous Adaptation at the community level in Ethiopia
4255	AER 2017	SCCF	UNDP	Swaziland	Adapting National and Transboundary Water Resources Management to Manage the Expected Climate Change
4261	AER 2017	SCCF	UNDP	Azerbaijan	Integrating climate change risks into water and flood management by vulnerable mountainous communities in the Greater Caucasus region of Azerbaijan
4368	AER 2018	SCCF	IFAD	Ghana	Promoting a Value Chain Approach to Climate Change Adaptation in Agriculture in Ghana
4431	AER 2017	LDCF	UNDP	Maldives	Increasing Climate Change Resilience of Maldives through Adaptation in the Tourism Sector
4447	AER 2018	LDCF	FAO	Haiti	Strengthening climate resilience and reducing disaster risk in agriculture to improve food security in Haiti post-earthquake
4570	AER 2018	LDCF	IFAD	Togo	Adapting Agriculture Production in Togo
5002	AER 2017	LDCF	UNDP	Benin	Strengthening Climate Information and Early Warning Systems in Western and Central Africa for Climate Resilient Development and Adaptation to Climate Change
5320	AER 2016	LDCF	UNEP/UNDP	Global	Assisting Least Developed Countries (LDCs) with Country-driven Processes to Advance National Adaptation Plans (NAPS)